AGRICULTURE
and FOOD ECONOMY
in POLAND

MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT

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FOREWORD

Ladies and Gentlemen!

We are handing over to you another edition of the publication "Agriculture and food economy in Poland". This periodic publications shows the up-to-date data on the situation in our agriculture and in processing and foreign trade in agri-food products. Here, you will also find the basic information about the institutions supporting agriculture.

The changes that we are preparing are aimed at the even more efficient use of financial resources, which should be geared towards the further development and modernisation, towards innovation. The experiences of the recent years, in particular, last year's drought, show that the changes must also cover the issues related to the insurance system for crops and livestock. Agriculture is this sector of the economy, which is dependent on the weather conditions to the largest extent. Therefore, it requires special solutions.

In our plans, we will also seek to align the support levels for farmers within the European Union so as to guarantee the real conditions of equal competition. We are going to carry out these activities on the occasion of reviewing the Common Agricultural Policy. Also, we will seek to simplify this policy significantly, as announced by Commissioner Phil Hogan.

There are a lot work and changes ahead of us. However, I am convinced that they will allow to improve the situation of farmers and to guarantee the further development of agricultural holdings.

I wish you an interesting reading and I also hope that it will be useful and helpful to you in the current analyses or evaluations of the situation in Polish agriculture, processing and foreign trade in agri-food products.

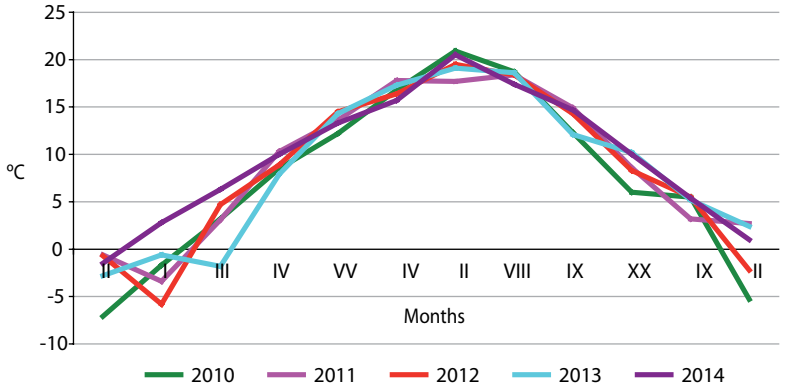
Krzysztof Jurgiel
Minister of Agriculture and Rural Development

POLAND – GENERAL INFORMATION

Poland, medium-sized, Central-European country, total surface of 3 127 000 km^2 and population of 38.5 million, occupies 6th place in the EU-28, both in terms of population and area. In terms of the agricultural population, Poland holds 1st place in the European Union, as well as 2nd place (after Romania) in terms of the number of agricultural holdings. Persons working in agriculture, hunting, forestry and fishing industry is 2.5 times larger than the percentage share of employed in these sectors in the EU-28 (accordingly – 14.5 and 5.6%). Poland occupies 7.2% of the total EU area, bordering 7 countries, including 4 EU member states (Germany, the Czech Republic, Slovakia and Lithuania) and 3 from outside the European Union (Russia, Belarus, the Ukraine).

The country is characterized by great natural and environmental diversity. Specific protection encompasses 23 national parks, occupying nearly 314.7 thousand ha, 1481 nature reserves occupying a total of 165.7 thousand ha, 122 landscape parks occupying an area of nearly 2606 thousand ha, and 36.4 thousand natural monuments. The share of forests in the total land area of the country, exceeds 30%. Many animal species are under protection, of which the most important include: wisent (1432 heads), rupicapra (391 heads), bear (163 heads), beaver (100 216 heads), lynx (309 heads) and wolf (1276 heads).

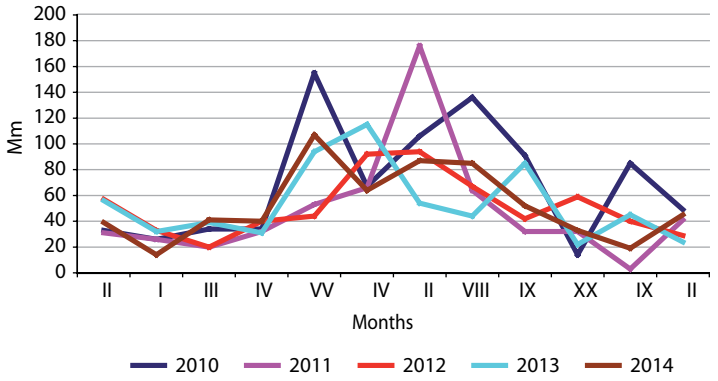
Figure 1. Average monthly air temperatures in Poland between 2010-2014 (in °C)



Source: Agriculture in 2014 Central Statistical Office (GUS), Warsaw 2015.

More than 75% of Polish territory is situated below 200 masl, including 0.2% below 0 masl, and only 3.1% above 500 masl. The climate is characterized by significant fluctuations in the length of individual seasons. In the last 5 years, the average air temperature ranged from 7.5°C to 9.6°C, and precipitation between 576 mm to 830 mm.

Figure 2. Average monthly precipitation in Poland between 2010-2014 (in mm)



Source: Agriculture in 2014 Central Statistical Office (GUS), Warsaw 2015.

Atmospheric precipitation constitute the main source of water resources, and are characterized by high fluctuations between years, months and regions. The result of those fluctuations are draughts and flooding, as well as floods. In 2014, data as of 31 December, temperature and precipitation measurements were carried out by 263 stations and posts, and precipitation measurements only – 960 dedicated station. The absolute temperature maximum in 2014, was recorded in August at the meteorological station in Radostowo, amounting to 36.3°C, and the lowest was recorded on in December at the meteorological station in Łopuszna, amounting to -25.0°C. The largest amplitude of extreme temperatures in Poland 2014, amounted to 61.3°C. The maximum daily precipitation in 2014, was recorded in May at the meteorological station Morskie Oko, amounting to 197.0 mm.

Poland is classified as a country with poor water resources. The average annual outflow of surface waters, together with tributaries from abroad, between 1980-2013, amounted to 62.3 km^3, in 2014 – 52.2 km^3, and only from the country – 45.6 km^3. It amounts to an annual supply of 1.2 dam^3 per inhabitant, whereas the average European supply is estimated at 4.6 dam^3 per inhabitant.

Water supply in Poland is characterized by high seasonal variability and irregularity of its territorial distribution. Reservoirs have a low capacity and may retain only 6% of the annual outflow of water in the country, which does not ensure sufficient protection against periodical excesses or shortages.

Territory-wise, Poland is divided into 16 provinces, 314 counties, 66 city counties and 2479 municipalities. Auxiliary units in municipalities include i.a. village councils in the number of 40 617 000. The largest in terms of area (35.6 thousand km^2) and population (5.3 million) is the Mazowieckie Province. The smallest in terms of area (9.4 thousand km^2) and population is the Opolskie Province (1.0 million). The largest in terms of area is the county of Białystok (2975 km^2), and the smallest – Bieruńsko-Lędzińskie county (158 km^2), in terms of population, the largest is the Poznań county (358.9 thousand), and the smallest – the Sejny county (20.8 thousand). The largest, municipality, area-wise, is Pisz (634 km^2), and the smallest Górowo Iławeckie (3 km^2). In terms of population, the largest district is the Capital City of Warsaw (1.7 million), also being a city county in the Mazowieckie Province, and the smallest – the Krynica Morska municipality (1.4 thousand) in the Pomorskie Province.

The Polish Population in 2014 amounted to 38.5 million people, of which 23.2 million inhabited cities and 15.3 million – rural areas. As compared with 2005, the number of inhabitants increased by 323 000 people, but only in rural areas (by 529 000). The number of inhabitants in the cities in the same period, decreased by 206 000 people. As compared to 2013, the number of live births has increased (from 369.6 to 375.2 thousand), also increasing the fertility rate (from 1.256 to 1.290). As compared to the previous year, the live births ratio per 1000 inhabitants has increased, amounting to 9.7, as compared to 9.6 in 2013. In 2014 the number of inhabitants decreased by 18 000

Map 1. Territorial Division Units in Poland

people. Forecasts prepared by the Central Statistical Office (GUS) in 2014, considering fertility, mortality and foreign migration tendencies, indicate that the Polish population will steadily decrease and may reach: in 2020 – 38.1 million, in 2030 – 37.2 million, in 2040 – 35.7 million, in 2050 – 34.0 million people.

Selected information about the economic situation of Poland in 2014

After the economic slowdown in 2012-2013, 2014 saw the reinforcement growth trends in all fields. As a result, the GDP has increased by 3.4%, as compared to EU states with 1.3%, Germany with 1.6%, and the Eurozone with 0.9%. Slightly higher growth rates were recorded in Ireland, Hungary and Malta. The effects of the Ukrainian-Russian conflict escalation influencing the considerable weakening of the dynamics of both their economies, decrease of their national currencies' value, and intensifying inflation did not have a significant importance for our GDP. Unlike export, as recoded in previous years, it was internal demand, both investment and consumption, which became the main factor affecting the level and growth of the GDP.

Gross expenditures on fixed assets increased by 9.2% (in 2013 it was 1.1%). Intensification of investment operations resulted from the acceleration of investment operations of realestate and public sector companies. The increase of propensity to investment was influenced by a use of growing production capacity and improvement of the financial situation of companies. Industrial production and construction-installation dynamics were also on a stable level.

A gradual improvement of the labour market situation was affected by a rebound in economic activity. Teh number of unemployed has decreased by 15.4%, which resulted in the unemployment rate decreased to 11.5%, i.e. the lowest level since 2008. At the end of the year, employment agencies had 1825.2 thousand unemployed persons registered, i.e. 332.7 thousand less than in 2013. The percentage of long-term unemployed in the overall number of unemployed has increased from 53.7% as of December 2013, to 57.7% as of December 2014. The average gross monthly remuneration (excluding annual bonuses) in the enterprises sector reached an average of 3900 PLN and was actually 3.4% higher than in the previous year. The average nominal retirement and employee pensions reached nearly 2000 PLN, and its actual purchasing power increased by 3.6%. In 2014, the value of cash transfers from persons working abroad amounted to 3.85 billion EURO, and was lower by 134 million EURO, i.e. 3.4%, than

in 2013. The actual value of consumer credits in the banking system has increased, resulting from alleviated criteria, lending conditions, acquisition costs in connection with lowering margins in combination with interest rate decreases. The global gross disposable income in households are estimated to have been 3.1% higher than that recorded in 2013.

In 2014, as opposed to the three previous years, the main drive for economic growth was internal demand (investment and consumption). Total demand has increased by 4.9% (as compared to 0.4% in 2013), due to the increase in accumulation by 11.4% and consumption by 3.4% (after a 1.4% increase in 2013). It is confirmed by data on retail sales, which in 2014 increased by 1.6%, including of consumer goods by 2.5%, with a decrease in sales of non-consumer goods by 2.9%. Consumption growth was influenced in 3.1% by an increase in household consumption, and public consumption increased by 4.7%.

Business investments have also gained momentum. Gross expenditures on fixed assets were 9.2% higher than in 2013. Such a large increase of investment outlays proves that companies began to perceive the growth in demand as being permanent and requiring the increase of production capacity.

The maintaining of growth trends in our economy was fostered by export. In 2014, the exportation of goods, as calculated in EURO was 7% higher than the year before, and import, by 7.3%. As a result, the balance was minus 2.7 billion EURO, as compared to minus 2 billion Euro in 2013. The greatest impact on foreign trade in agri-food products was had by the overall global situation. The main conditioning factors were: a rapid decrease in oil prices, exchange rate fluctuations, especially the appreciation of the USD vis-à-vis other currencies, the increasing geopolitical uncertainty, trading restrictions with Russia, as well as the destabilization in the Middle East. The value of Polish agri-food export has increased by 7.1%, to a record 21.9 billion EURO, and import by 5.7% to 15.1 billion EURO. As a result, the surplus has increased to a never before recorded value of 6.7 billion EURO as compared to 6.1 in the previous year. The surplus in food trade seriously reduces the deficit of Polish foreign trade, as its value has nearly thrice exceeded the deficit value of total trade. It also has a positive impact on the economic situation in agriculture and the food industry, because more than a third of total production is directed to export.

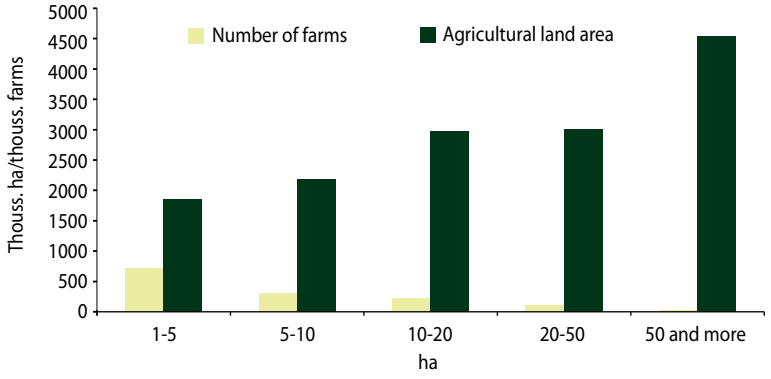
In 2014, the public finance situation has improved. The deficit was at the level of 29 billion PLN, as compared to 42 billion in 2013. The national and local government agencies' deficit, as well as the national debt relation to the GDP was more favourable than the year before. The European Commission consented to suspend the excessive deficit procedure. Ending it however, necessitates the intensification of activities leading to until obtaining full financial balance.

AGRICULTURE

General description

Polish agriculture is characterized by large fragmentation – the average area of agricultural land (UR) per 1 holding, is gradually increasing, and in 2014 reached to 10.3 ha of agricultural lands (in 2011 9.1 ha, and in 2002 5.8 ha). Despite a certain acceleration of concentration, a little over halve holdings in Poland (51%) uses no more than 5 ha of UR. Those holdings together hold 12.7% of UR. Nearly 75% of holdings use less than 10 ha of UR, and their total share in agricultural lands is 27.7%. These normally operate using traditional methods, with low mineral fertilizing and chemical plant protection products use, as well as industrial fodder in livestock alimentation, especially cattle. Next, nearly 31% of agricultural lands is used by holdings of 10-30 ha. More than 72 000 holdings (5.2%) occupy an area of more than 30 ha of UR, amounting to little more than 6 million ha of UR, i.e. 41.3% of agricultural lands.

Figure 3. The use of lands in different holdings of varying sizes in 2014



Source: Agriculture in 2014 Central Statistical Office (GUS), Warsaw 2015.

The overall number of holdings is dominated by those of an area less than 10 ha of UR (nearly 73%), which use 27.8% of UR. The visible, gradual changes in the agricultural holdings structure, cause a growing number of large area holdings. They also have an increasingly greater share in the use of agricultural land. The share of farms of total area of 50 ha and more in the use of agricultural land in 2005, was 25.1% and has increased to 31.2% in 2014 . Despite the unfavourable agrarian structure and a worse, as compared to other EU member states, quality of agricultural production space, Poland is a major global and European agricultural, horticultural and animal producer, with a significant workforce.

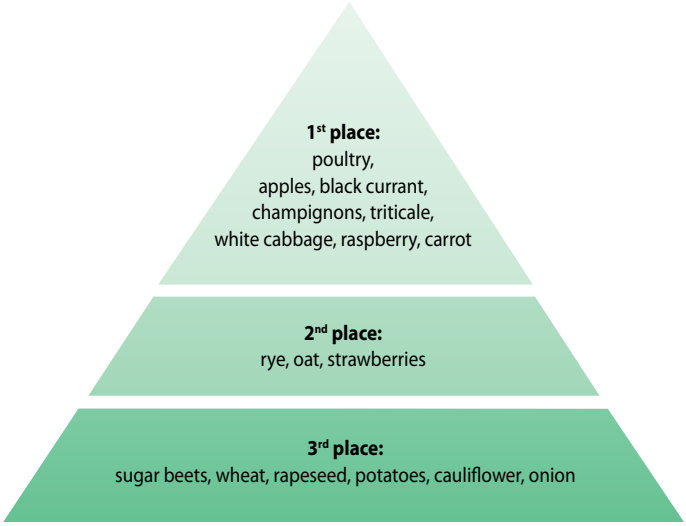
Table 1. The number of holdings and agricultural land area in 2014

Specification	To 1 ha	1-5 ha	5-10 ha	10-30 ha	30-50 ha	50 ha and more	Total
UR surface in thousand ha	22.2	1851.3	2176.6	4485.0	1490.8	4532.5	14 558.4
The number of holdings in thousands.	28.2	719.0	309.6	280.3	39.6	33.1	1409.8
UR/holding ha	0.8	2.6	7.0	16.0	37.6	137.1	10.3
Share in UR area in %	0.2	12.7	14.9	30.9	10.2	31.1	100
Share in the number of farms. %	2.0	51.0	21.9	19.9	2.8	2.4	100

Source: The use of land and sawn area in 2014, Central Statistical Office (GUS), Warsaw 2015.

Currently the global value of agricultural holdings' production in Poland (in current prices) places Polish agriculture at 7th place in the European Union behind France, Germany, Italy, Spain, Great Britain, and the Netherlands. The greatest share in the commodity structure of agricultural production in 2014 was had by: cow milk (18.6%), pork livestock (13.9%), poultry livestock (13.5%), cereals (13.3%), vegetables (9.1%), industrial plants (7.3%), beef and veal livestock (6.3%), chicken eggs (5.7%) and fruit (5.1%).

Figure 4. Polish agriculture in the EU-28 in 2014



Source: prepared on the basis of Eurostat data.

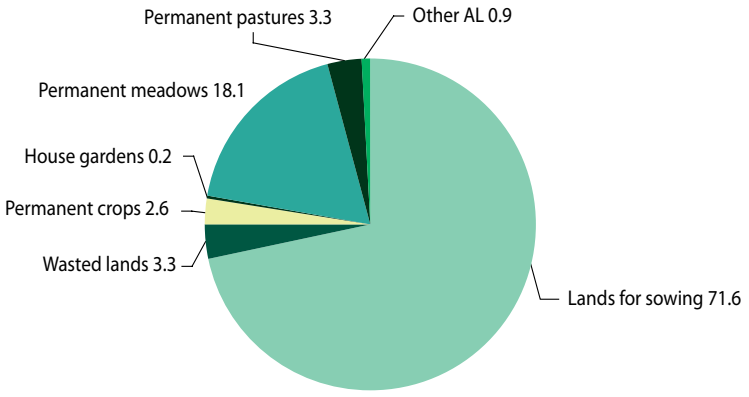
Poland also has a significant share in production in the EU-28. In 2014, it was the largest producer of apples (26.4% in the EU-28), poultry meat (15.1%), carrots (16%), white cabbage (31.4%), triticale (39%), blackcurrant (75%), champignons (27.6%), the second largest producer of rye, oat (18.6%), strawberries (18.8%), and the third largest producer of cereals (9.3%), sugar beets (9%), rapeseed (12.8%), onions (10%), potatoes (11.4%) (Fig. 4). Poland is also a significant producer of: milk, cheese, butter, tomatoes and tobacco.

Soil and climate conditions, as well as regional traditions are the main determinants regarding production specialization. Central, eastern and northern Poland are areas of rye cereal mixes and corn cultivations, as well as grasslands. Orchards and berry plantations are mainly focused in the Mazowieckie (the Grójecki region), Lubelskie , Wielkopolskie and Łódzkie Provinces, as well as the Sandomierz region. Plants with higher soil and climatic requirements are more often cultivated in south-eastern and western Poland, and in the Żuławy and Warmia regions. These are mostly intensive cereals, i.e. wheat, as well as sugar beets and of rapeseed.
Dairy cattle rearing is mainly concentrated in the Podlaskie, Mazowieckie, Warmińsko-Mazurskie and Wielkopolskie Provinces, and swine in Wielkopolskie and Kujawsko-Pomorskie. Larger sheep holdings are only present in the mountain region (Małopolskie and Podkarpackie Provinces).

Agricultural land resources and structure of its use

2014 did not bring about significant changes in the total area or structure of use of agricultural land belonging to holdings. In 2014, they used 14.6 million ha of UR, of which 13.2 million ha was cultivated by individual farms. 14.4 million ha were kept in good agricultural condition, of which 10.4 million ha were sown, 3.1 million ha were permanent grasslands, including 2.6 million ha of permanent meadows, the area of which increased by 69.4 thousand ha; 376 thousand ha were permanent crops (including 341.8 thousand ha of orchards), 475.2 thousand ha of UR were set aside, 134.1 thousand ha were classified as other agricultural land.
As compared to 2013, the area of lands kept in a good agricultural condition increased by 0.1%. In the general structure, of agricultural lands kept in a good agricultural condition (14.4 million ha – 100%), 71.6% were sown (Fig. 5).

Figure 5. Structure of use of agricultural lands in 2014 (in %)



Source: Agriculture in 2014 Central Statistical Office (GUS), Warsaw 2015.

The quality of agricultural lands in Poland is lower than the EU average. A large share of low-quality and acidic soils reduces the agricultural usefulness of lands. The share of light, sandy soils in Poland is two times bigger than the EU average; in Poland it is 60.8%, and in the EU – 31.8%. Soils bonitation ratio in Poland, expressed as a quotient of conversion hectares to physical agricultural lands is 0.82. Unfavouable soil conditions and overlapping worsening climate conditions are reflected in lower soil productivity as compared to the EU average.
Since Poland's accession to the EU, the area of lands set aside has decreased. In 2014, the area of lands set aside amounted to 475.2 thousand ha, and was 2.9 times smaller than in 2004, but slightly greater than in 2013 (by 6.4%).

Table 2. Structure of land use in 2014

Specification	Thousand ha	%
total agricultural lands	14 558.4	100
including agricultural lands in a good condition	14 424.2	99.1
sown lands	10 419.9	71.6
lands set aside	475.2	3.3
permanent crops	376.0	2.6
including orchards	341.8	2.3
kitchen gardens	33.3	0.2
permanent meadows	2634.0	18.1
permanent pastures	485.8	3.3
other agricultural lands	134.1	0.9

Source: Agriculture in 2014 Central Statistical Office (GUS), Warsaw 2015.

The tendency to reduce the area of lands set aside is related direct payments for each agriculturally used hectare, and the price increase of agricultural land.

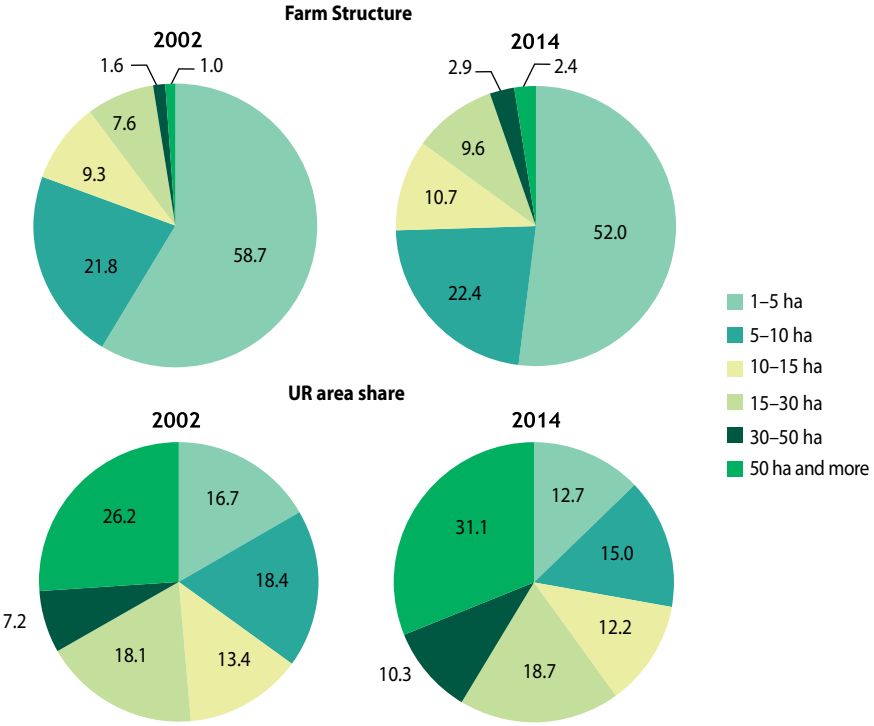
Data on the number of farms in individual years confirms the change tendency in Polish agriculture, observed in recent years, particularly after accession. Thus – as compared to the 2002 Agricultural Census results – the main changes pertain:

- reduction in the number of agricultural holdings, and a simultaneous increase of their areas;
- significant changes in the structure of agricultural holdings, including a 49.4% decrease in the number of smallest holdings (1-2 ha of total area), 27.4% decrease in the number of 2-10 ha holdings, 19.4% of 10-15 ha, and 10.2% decrease of 15-30 ha holdings. These changes are accompanied by a significant growth of larger holdings, with total area of 30-50 ha, by 25.1%, and a 66.8% increase in the number of holdings with total area of 50 ha and more;
- slow, but visible popularization of the multifunctional farm model, especially in the group of small holdings that conduct activities other than agricultural – partially or entirely resigning from agricultural activities;
- a decrease in the total area of lands in use by holdings, as a result of using them for non-agricultural purposes, e.g. infrastructure, with a simultaneous decrease of agricultural land area (from 16.9 to 14.6 million ha);
- a slight decrease in the area of sowings, with a simultaneous shift in the structure of cultivations – a decrease in of the area of cereals (mainly rye, barley, oat, and a growth of sowings of triticale and corn for grains), potatoes and sugar beets with a simultaneous of growth in sowings of and of rapeseed and fodder plants;
- a growth of total cattle livestock, with a simultaneous reduction of cow herds, and a growth in their efficiency. This trend is connected with a growing interest in the production of cattle for slaughter after accession, and an increase in the profitability of its production;
- improvement of agricultural holdings' inventory of production means, confirming the post-accession process of agriculture modernization;
- in 2014, the structural changes were continued. As compared with the previous year, the number of holdings with an area of at least 1 ha of UR has decreased by 0.9% to 1381.6 thousand, mostly as a result of the decrease in the number of smaller holdings, using up to 10 ha of UR (by 1.9%). The number of holdings with areas of 10-50 ha was relatively stable (1.4% increase). The number of holdings with areas of 50-100 ha has increased by 5.5%, and those with areas of more than 100 ha, by 12.5%.

Despite these changes, the structure of agricultural land use has not significantly changed in the last year. The total share of the smallest and small holdings with areas of up to 10 ha of UR, in the structure of land use, has decreased by 0.5%, of the group 10-50 ha UR, has decreased by 0.4% with a simultaneous increase in the share of larger farms (50 ha, and more), by 1%.

The changes in the agrarian structure are a result of an economic obligation to improve management effectiveness, an increase in work efficiency, principles of operating in a market economy, and direct support of agricultural income.

Figure 6. The structure of farms and agricultural lands in holdings of varying size between 2002 and 2014



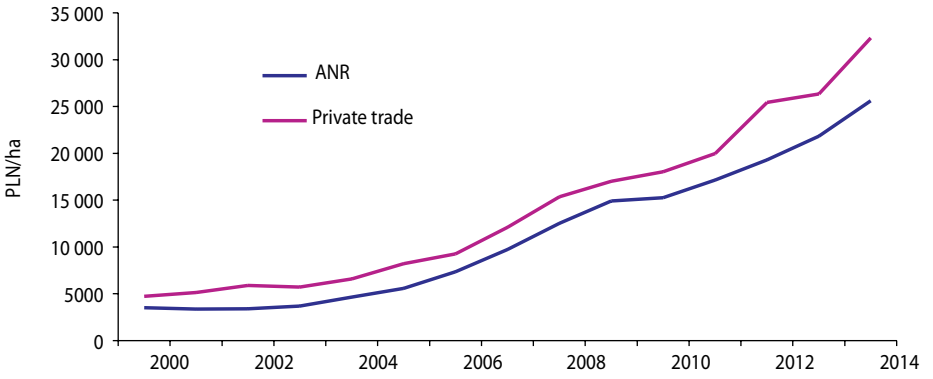
Source: National Agricultural Census 2002, Statistical Yearbook of Agriculture 2014, Central Statistical Office (GUS) Warsaw 2014, The use of lands and sowing structure in 2014, Central Statistical Office (GUS) Warsaw 2015.

Since the integration with the EU, an increase of interest in purchasing agricultural land has been recorded, which may lead to the increase of its prices. Between 2004 and 2014 land prices in market trade have increased almost 4.9 times, to more than 32 thousand PLN/ha. The price growth of lands sold by the Agricultural Property Agency (APA), at that time was even higher (5.5 times), but the level in all years was lower than in private trade by about 15-30%, depending on the economic situation and farmer interest in purchasing land (Fig. 7).

In 2014, the land price growth in private trade was higher (22.7%), than those sold by the APA (by 17.3%). The reason for could have been the continuous high demand areas where market supply is severely limited, especially the private market, exhausting state lands reserves, lasting price differences beneficial for the Polish farmer between Poland and the EU-15 countries, price growth of lands in Europe and in the world.

Intensification of transactions in the agricultural land market is characterized by significant regional diversity, conditioned mainly by supply, the differences in structure, holding economic force, and diverse motivations for purchasing land.

Figure 7. APA and private trade land sales prices in PLN/ha



Source: APA, GUS.

The relatively smallest turnover has been noted in southern and central Poland, where the holding structure is the most fragmented and dominated by writing off lands to children reaching adulthood. It is also the reason behind a significant regional diversity in land prices. The highest prices (higher than average by 16-45%), are reached by lands sold by the APA in the Wielkopolskie, Kujawsko-Pomorskie, Śląskie, and Opolskie Provinces, where the level of agricultural production and farmer skill are high, the quality of agricultural production area is above average, the interest in increasing the area of holdings as the basic factor facilitating a growth in income remains high. In provinces: Lubuskie, Lubelskie and Świętokrzyskie, land prices are 30-35% lower than the average.

A significant factor affecting the price level, is soil quality, area location, and transport infrastructure condition. Large fluctuations of agricultural product prices result in a fluctuations, despite a systematic growth of nominal prices, of land prices expressed in natural meters. Despite a deterioration of income in agriculture, the Agricultural Property Agency in 2014 sold 120.6 thousand ha, i.e. 18.5% less than in the previous year, but 25.6% more than in 2010 (Fig. 8).

Figure 8. Sales of agricultural land by the APA between 2004 and 2014 (thousand ha)

Source: APA, GUS.

Table 3. Land sales from the State Treasury Agricultural Property reserve in thousand ha

Specification	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Thousand ha	104.5	108.3	107.4	103.7	78.2	102.4	96.5	125.1	132.2	148.0	120.6
Ratio changes (previous year = 100)	102.8	103.6	99.2	96.6	75.4	130.9	94.2	129.6	105.7	112.0	81.5

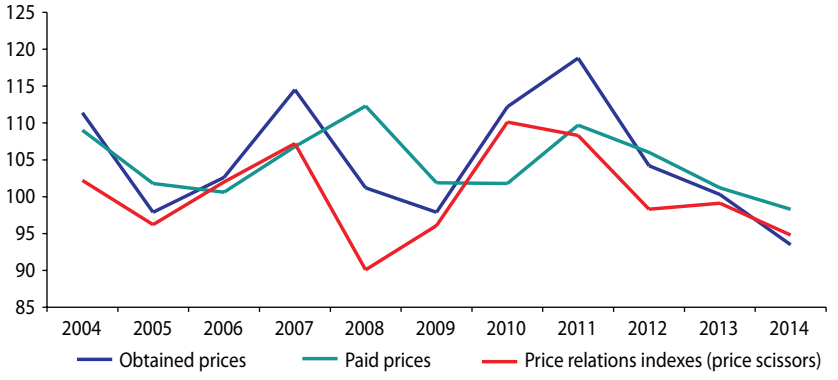
Source: ANR and GUS.

Factors influencing the steady, high demand for land were past growth in agricultural income, preferential credits with subsidized interest, possibility of sales land in installments offered by the Agricultural Property Agency, lasting, beneficial for Polish agriculture, price differences between Poland and the EU-15 states, a growth of land prices in Europe and in the world.

Factors shaping the production-economic agriculture situation

Despite a production growth in 2014, like in the two previous years, the economic situation in agriculture was not favorable for producers. The prices of individual farm produce were decreased by 6.5%. It was caused by a significant reduction in plant (by 12%) and animal (by 2.6%) product prices. With a decrease in the prices of goods and services for the purpose of current production and investment (by 1.7%) lower than the decrease in prices of products sold by holdings, the price relation index ("price difference") amounted to 94.8 as compared to 99.1 in 2013, 98.3 in 2012, and 107.3 in 2011, which means a deterioration of financial performance of agricultural production and the financial situation of agricultural holdings

Figure 9. Price change indexes paid and received by agricultural producers and "price differences"



Source: data of the Central Statistical Office (GUS).

Drops in product agricultural prices in 2014 included nearly all product groups. In the EU-28, in 2014, the average prices of plant products decreased by 9.5%, and animal products by 2.8%. They were mainly the cause of the embargo imposed by the Russian Federation, a growth of production and global market recession. In Poland in 2014, price were reduced of wheat by 14.2%, rye by 3.7%, triticale by 9.5%, barley by 14.6%, corn by 19.1%, rapeseed by 10.4%, potatoes by 19.3%, sugar beets by 15.3%. Prices have also decreased for the purchase of cattle by 3.8%, swine by 10.6%, poultry by 3.3%, egg prices remained the same, and milk prices increased by 1.1%.

Agriculture supply in production means

Fertilizer consumption in Poland

Application of fertilizers is of critical importance for maintaining a proper production potential of soil, and providing high, good quality yields of cultivated plants. Mineral fertilizers are an important element of the agricultural plant cultivation cost structure, which substantially limits the level of their consumption.

The global consumption of mineral fertilizers in Poland in the economic year 2013/14 was 1935.3 thousand tons per pure ingredient, and was 0.4% smaller, as compared with the previous season (tab. 4). The consumption of nitrogen fertilizers decreased during that time by 6.8%, to 1098.4 thousand tons, phosphorous fertilizers by 8.8%, to 341.1 thousand tons, and consumption of potassium fertilizers increased by 27.1%, to 495.8 thousand tons.

On average, in the country, for crops, in 2014, the consumption of pure component fertilizers (NPK) per 1 ha of UR was 132.9 kg, and was on a similar level as n the previous economic year, including on agricultural lands in a good condition, 134.2 kg, with individual farms consuming accordingly 127.8 kg and 128.8 kg of NPK. At the same time, the specific consumption of nitrogen fertilizers went down by 6.4% to 75.5 kg N/ha of UR, phosphorous fertilizers by 8.6% to 23.4 kg P_2O_5/ha of UR, and potassium fertilizer consumption increased by 28.1%, to 34.2 kg K_2O/ha of UR. In consequence, the relation of N:P:K was only slightly improved, and amounted to 1.0:0.31:0.45, whereas in sustainable fertilizing for crops in Polish soil conditions, the recommended proportions are: 1.00:0.50:0.98, and for permanent grasslands: 1.00:0.46:0.68.

Table 4. The consumption of mineral and calcium fertilizers in Poland (kg/ha UR)

Fertilizers	2005/06	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
Mineral NPK	123.3	132.6	117.9	119.6	119.2	125.8	133.0	132.9
including: N	62.5	70.7	68.0	69.2	68.9	73.1	80.7	75.5
P_2O_5	27.7	28.8	23.3	23.7	23.7	24.8	25.6	23.4
K_2O	33.1	33.3	26.6	26.6	26.6	27.9	26.7	34.2
Calcium CaO	54.8	38.5	32.9	38.2	37.6	33.9	43.4	47.9

Source: Production means market, IERiGŻ-PIB and GUS.

In the season 2013/14, approximately 1036 thousand agricultural holdings applied mineral fertilization, which was approximately 73% of all the holdings running agricultural operations.

The level of mineral fertilizing between individual provinces was very diverse. As in the previous years, the largest NPK consumption was recorded in the south-western region, in the Opolskie Province – 188.0 kg/ha of UR. The least NPK was consumed in south-eastern Poland, in the Małopolskie Province – 84.6 kg/ha of UR and Podkarpackie Province – 80.1 kg/ha of UR. In comparison with the 2012/13 season, mineral fertilization increased the most in the Mazowieckie (by 35.9%) and Małopolskie (by 24.0%), and decreased in the Lubuskie (by 42.0%) and Łódzkie (by 18.7%) Provinces. The regional diversity of mineral fertilization level is reflected in the yield size obtained in individual provinces.

In the season 2013/14, consumption of fertilizers calcium increased, amounting to 697.2 thousand tons per CaO, which means 9.8% more, as compared to the previous season. On average, 47.9 kg of CaO/1ha of UR was used, i.e. 10.4% more than in the previous year. At the same time, in the economic year 2013/14, calcium fertilizers were applied only in 133 thousand agricultural holdings, i.e. 9% of the total number of agricultural holdings. In the season 2013/2014, calcium-magnesium fertilizers constituted ca. 60% of consumed calcium fertilizers with 415.8 thousand tons consumed, i.e. ca. 85 thousand tons more than in the same period the year before. The level of calcium fertilizing in the season 2013/14 was ca. 3 times lower than the consumption level of mineral fertilizers.

Low consumption of calcium fertilizers in Poland contributes to the increasing soil acidification. Based on the data of the National Chemical-Agricultural Station, with total area tested in 2010-2013 of 3858.4 thousand ha, approximately 76% of soils has an acidic solution, including 43% with a very acidic or acidic solution (pH below 5.5). Only 24% of soils used for agriculture is characterized by a neutral or alkaline solution (pH above 6.5). Ca. 55% of agricultural lands in Poland are estimated to require liming, with 21% of those in need of immediate liming, and in the Małopolskie and Podkarpackie Provinces, 40% of soils require liming.

The evaluation of soil fertilizing requires considering natural fertilization, which next to mineral fertilizing is a valuable source of necessary nutrients for plants, and enriches soil with humus, improving its properties. In the season 2013/14, ca. 665 thousand holding owners applied natural fertilizers, with manure – ca. 649 thousand, liquid manure – ca. 109 thousand and ca. 55 thousand used slurry. The agriculture sector consumed 38.8 million tons of manure, which, as per pure NPK ingredient, enriched agricultural lands in a good condition by over 36.3 kg of NPK.

Consumption of mineral fertilizers in EU member states

The European Union in the season 2012/13, witnessed a partial re-emergence of demand for fertilizers, which was fostered by a steady decrease in mineral fertilizer prices, and beneficial price relations between fertilizers and cereals. Consumption of mineral fertilizers increased by 4.7% to 16.1 million tons per pure ingredient. The growth in demand was recorded both in EU-15 states, where consumption of mineral fertilizers increased by 5.3%, as well as in the EU-13, where the consumption increased by 3.4%. Despite a growth in mineral fertilizing in the EU-15 states, in the season 2012/13, its level was 5.5% lower in comparison with 2010/11, whereas in the EU-13, mineral fertilization increased by 11.9%. Differences in consumption tendencies of mineral fertilizers in EU-13 and EU-15 countries result mostly from the fact that in most EU-13 states fertilization is intensified, whereas EU-15 countries seek to optimize it. In the season 2012/13, consumption in all fertilizing groups has increased. The strongest growth in consumption was recorded in the phosphorous fertilizers group (by 5.8%), and the second largest in nitrogen (by 4.7%), followed by potassium (by 3.7%). Specific consumption of mineral fertilizers in the EU-28, in the season 2012/13, increased by 6.1%, to 87 kg NPK/ha of UR. The highest specific NPK consumption has for many years been observed in the Benelux Union which has a large share of intensive crops in its cultivation structure. In the season 2012/13, mineral fertilization in kg of pure component per ha of UR was: in Belgium and Luxembourg – 183 kg, the Netherlands – 134 kg. A relatively high level of fertilizing, i.e. above 100 kg NPK/ha of UR, was also recorded in countries such as: Germany (141 kg), Poland (133 kg), Ireland (122 kg), Croatia (111 kg) and France (106 kg). In other EU-28 countries, NPK consumption did not exceeded 100 kg/ha of UR. The lowest consumption was recorded in Romania (46 kg), Portugal (37 kg), and Greece (35 kg).

Plant protection product sales

There are currently 1431 plant protection products available on the market, including 656 herbicides (46%), 471 fungicides (33%), 193 insecticides (13%), and 111 other preparations (8%). Of 436 active substances approved for use in plant protection products by the European Commission, 258 are part of plant protection products approved for use in Poland.

The Minister of Agriculture and Development takes actions to ensure a minimum level of protection of cultivated plants. For this purpose he cooperates, with i.a. trade organizations regarding the extension of permits for the so-called small-area applications. Currently the list of permits for the application of plant protection products reared in small areas, or against harmful organisms causing losses only in certain areas, includes 30 agents.

The plant protection product distribution network in Poland is well developed, and provides availability for the purchase of agents across the whole country. Approximately 6991 points of sale have been recorded.

As compared to 2013, the sales of plant protection products in 2014 increased by 6.1% (tab. 5). The greatest share in the sales structure was comprised of herbicides (51.3%), fungicides and seed treatment (32.6%).

Table 5. The sales of plant protection products (in tons of active substance)

Specification	2010	2011	2012	2013	2014
Total	19 449	21 779	21 886	22 204	23 557
Insecticides	905	993	1288	1310	1478
Fungicides and seed treatment products	5755	6083	6297	6700	7673
Herbicides	10 489	12 408	12 654	12 518	12 073
Growth regulators	1522	1593	1395	1494	2119
Rodenticides	29	34	35	0.3	0.3
Other	748	668	217	182	213

Source: Agriculture in 2014 Central Statistical Office (GUS), Warsaw 2015.

Applying agents according to the type of cultivations is very diverse. On the whole, most plant protection products per area unit is applied to fruit and vegetable cultivations. Monitoring data of the Central Statistical Office (GUS) and of the Ministry of Agriculture and Rural Development indicates that the largest consumption of pesticides is present in fruit cultivations (e.g. apples – 10.5 kg of active substance/ha, cherries 5.3 kg of active substance/ha) and vegetables (e.g. field cucumber 3.8 kg of active substance/ha), and the lowest in cereals (rye 0.3 kg of active substance/ha, triticale 0.7 kg of active substance/ha, winter wheat 1.5 kg of active substance/ha, spring barley 0.58 of active substance/ha).

The prices of plant protection products in Poland in recent years underwent moderate changes. In December 2014 the prices of plant protection products in Poland were on average 1.6% higher as compared with December 2013, herbicide prices went up over this period by 2.5%, insecticides 1.8%, and fungicides 0.5%.

Production and sale of seeding material

According to the data Main Inspectorate of Plant Health and Seed Inspection (PIORiN) in 2014, a 0.2% increase has been recorded of plantation area for all agricultural plants as compared to 2013 (from 115.4 thousand ha to 118.8 thousand ha). This change, as compared to the previous year, was caused mainly by an increase in plantation area of legumes, hard-seeded (by 38.9%) and small-seeded (by 3.5%), sugar and forage beet (by 16.6%) and grasses (by 16%). In case of oil and fibrous plants a significant 85% increase of cultivation area was caused, first and foremost by an increase in the production of mustard white and soybean. Considering that in 2014 a low viral pressure was observed, and thus a relatively low disqualification percentage was recorded, the qualified plantation area of potato increased by 10.2% (as compared to the previous year) and was at the level of 5.25 thousand ha. As compared to 2013, a decrease took place of more than 11.1% of classified cultivation area in the cereal group. It should be noted however that as compared to the beginning of the decade, i.e. 2005, the total area of cultivations (agricultural plants and vegetables together) increased by 48.4%.

The National Register of Varieties includes 2437 varieties of plants (as of April 2015). The share of foreign varieties in the Register for agricultural plants in 2014 was 51.4%. In 2014, 611 plant varieties were declared, including 94% of agricultural plants. The dominant species were: winter rapeseed, corn, winter wheat, sugar beet, spring barley, and winter rye.

According to GUS, in the season 2013/14, the sales of seeding material of basic cereals amounted to 171.2 thousand t and was 0.7% higher than in the previous season. As compared to the previous season, farmers purchased more certified seeds of wheat (83.1 thousand t, i.e. 6.2% more than in the previous season), and less of rye (12.8 thousand t, decrease by 0.6%), barley (31.6 thousand t, decrease by 4.2%), oats (9.7 thousand t, decrease by 3.7%) and triticale (34.1 thousand t, decrease by 5%). Less purchased also certified seed-potatoes (55.4 thousand t, i.e. decrease

by 0.8%). The consumption of certified seeding meaterial per 1 ha of cultivation area in the season 2013/14 was: 29.9 kg of basic cereals, including wheat – 38.9 kg, rye – 11 kg, barley – 38.6 kg, oats – 22.3 kg, triticale – 29 kg, and potatoes 164.4 kg.

Agricultural Production Value and Price Relations

The global agricultural production in current prices in 2014 reached a value of 106 billion PLN; including vegetable 54.5 billion PLN, and animal 51.5 billion PLN. The dynamics of global production calculated in fixed prices amounted to 106.1%, including in individual holdings by 106.2%. Plant production, as compared to 2013, increased by 4.9%, and animal production by 7.3%. The growth in plant production was the effect of increased yields of most cultivated plants except for rye (-16.2%), fabaceae (-9.1%). The growth in animal production was caused by an increase in livestock production by 12.3%, including cattle (by 12.6%), poultry (by 12.5%), swine (by 12.2%), milk (by 2.1%) and chicken eggs (by 2.1%).

Table 6. The dynamics of agricultural production (fixed prices) (previous year = 100)

Specification	2004	2007	2009	2011	2012	2013	2014
	Global production						
Plant production	108.9	108.9	103.0	105.9	99.4	104.5	104.9
Animal production	102.9	102.9	101.7	97.9	98.6	105.0	107.3
Total agriculture	105.9	105.9	102.4	102.2	99.1	103.7	106.1
	Commercial production						
Plant production	112.1	99.3	107.2	108.3	101.9	108.2	98.1
Animal production	97.5	103.1	99.7	100.1	100.7	102.5	107.0
Total agriculture	103.3	101.5	103.1	103.8	101.2	105.1	103.0
Share of goods production in global production %	66.3	64.4	71.2	70.8	72.7	74.5	73.1

Source: Agriculture in 2014, Central Statistical Office (GUS), Warsaw 2015.

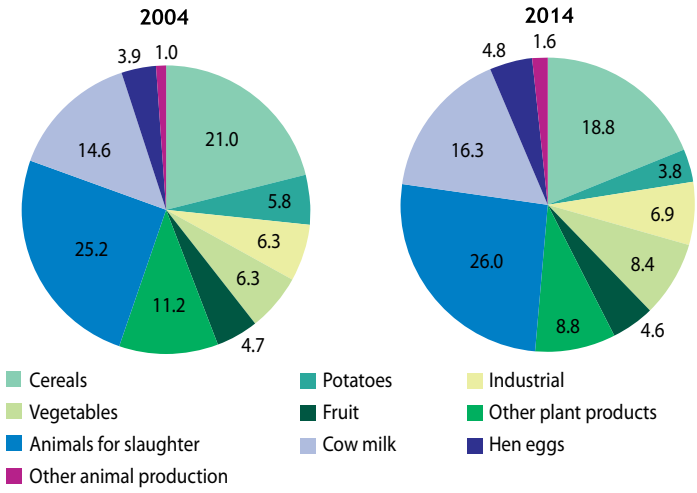
Commercial agricultural production in fixed prices has increased, as compared to the previous year, by 3%, with the growth in individual holdings amounting to 4.7%. Plant production has decreased by 1.9%, and has animal production has increased by 7%. Since 2000, a growth trend in commercial production can be observed. In comparison with 2004, the share of commercial production in the total global agricultural production increased by 6.8%.

Large fluctuations in the dynamics of plant and animal production in individual years are mainly the result of variable weather conditions, which affect the level of yields and harvests, and in consequence, the supply and price levels. That in turn affects the cost level and profitability, and, by extension, the size of animal production.

The situation in agriculture in 2014 was affected by a greater supply of agricultural products in recession conditions and a decrease in sales prices on the global agricultural market.

High cereal harvests (12% increase as compared to 2013) in recession conditions on the global market, resulted in a decrease in grain prices in the country. The increase of livestock supply and the embargo imposed by Russia on pork imports from Poland, resulted in price reduction for pork purchases. A similar price reduction was observed on the beef market. The increase of poultry livestock production and supply, with a simultaneous increase in domestic and foreign demand, caused poultry prices to remain on a slightly lower level than in 2013, and the

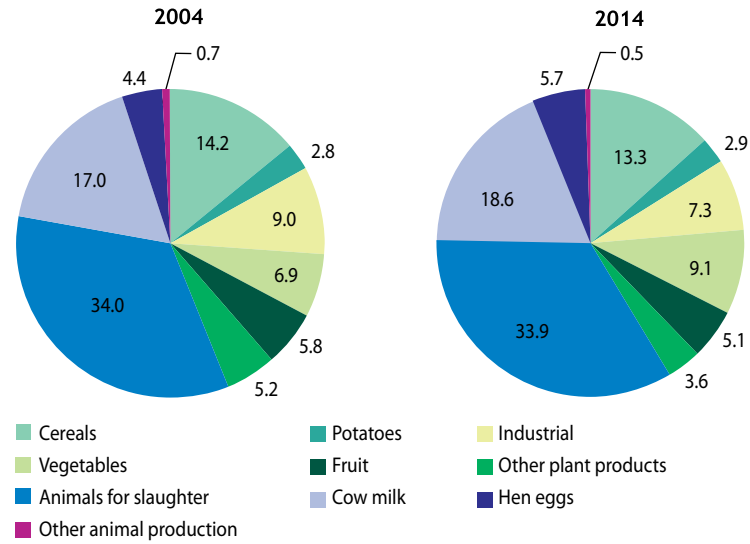
Figure 10. The structure of global agricultural production (%)



Source: Agriculture in 2005, Central Statistical Office (GUS), Warsaw 2006, agriculture in 2014, Central Statistical Office (GUS), Warsaw 2015.

situation on the domestic milk market was affected by the global market recession, Russian embargoes and the approaching date of liquidation of diary quotas. Despite such conditions, the situation in the country was affected the foreign trade turnover in agri-food products. With a slightly lower dynamics, agri-food export increased to a record 21.9 billion EURO, and import up to 15.1 billion EURO. As a result, the surplus has increased to a previously unrecorded value of 6.7 billion EURO, as compared to 6.1 billion EURO in the previous year.
Purchase prices of the majority of agricultural products in 2014 were lower than in 2013 by 7.6%, including plant products by 9.3%, and animal products by 3.5%.

Figure 11. The structure of commercial agricultural production (%)



Source: Agriculture in 2014, Central Statistical Office (GUS), Warsaw 2015.

Table 8. Commercial agricultural production price indicators (previous year = 100)

Specification	2004	2005	2009	2010	2011	2012	2013	2014
Total	122.5	97.3	97.2	107.0	115.7	104.0	101.9	94.1
including purchase	114.4	97.1	96.2	105.2	119.5	106.1	99.5	92.4
Plant production	124.0	93.9	90.1	119.2	117.8	98.4	100.6	90.7
Animal production	121.1	99.4	103.4	98.7	114.2	108.7	103.2	96.5

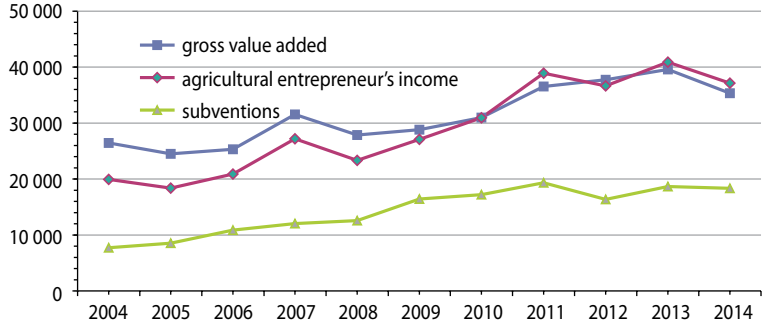
Source: Agriculture in 2014, Central Statistical Office (GUS), Warsaw 2015.

Farmers' income

The level of income in agriculture is mainly determined by the volume of agricultural production, price level and their variability, as well as outlays incurred in the production process. Of importance to income are also transfers, both to agriculture (payments subventions and interest received by farmers), as well as those from agriculture to the state budget (taxes, rents, credit taxes).

An income situation analysis in agriculture, based on Economic Accounts for Agriculture (RER) indicates that the income in Polish agriculture in 2004-2011 has increased by 95.2%. In subsequent years, income fluctuated, decreased in 2012 by 5.8%, to the level of 36.7 billion PLN in current prices, then increased in 2013 by 11.4%, to the level of 40.9 billion PLN. According to the last account for 2014, agricultural entrepreneur income at the national economy level has significantly decreased by 9.1%, as compared to the previous year, and reached 37.1 billion PLN (tab. 8, Fig. 12).

Figure 12. Agriculture Economic Results (current prices, million PLN)



Source: own study on the basis of the Economic Accounts for Agriculture; Institute of Agricultural and Food Economics (verified in October 2015).

The growth of agricultural entrepreneur income in 2004-2009 was mainly affected by an increase in subventions value. Their share in entrepreneur income over this period, has increased from 38.8% in 2004, to more than 60% in 2009. In subsequent years decreasing significance of subventions in income was observed. Over the last two years, i.e. 2013 and 2014, this share has increased accordingly to 45.6 and 49.3% (tab. 8, Fig. 12). A gradual decrease of the share of subsidies in income observed in recent years, meant that their influence on the income growth dynamics in agriculture is becoming less and less significant. Currently however, their significance is once again increasing. The pool of subsidies for agriculture in 2014, was reduced by 1.7%. In 2014, the subsidy structure for agriculture was changed. Estimated direct payments for agricultural products in 2014 were reduced by 47% from 2481 million PLN to 1313 million PLN, as compared to 2013. It was accompanied by a 5.2% increase in other subsidies (covering

i.a., direct payments for agricultural lands, to areas with unfavorable farming conditions and agri-environmental payments both historical and national). The reduction of the pool of direct payments for agricultural products in 2014 was directly associated with the liquidation of the basic supplementary payment, and supplementary payment to fodder plant cultivation area, grown on permanent grasslands, (animal payments).
The value of the agricultural sector production, according to RER in 2013, as compared to 2012, increased nominally by 2.4% in 2013, and in 2014, decreased by 3%. With a simultaneous growth in indirect consumption by accordingly 0.8% in 2013 and 2.2% in 2014, as compared to the previous year and a lower value of subsidies to agricultural products (accordingly by 25 and 47%). As a result, the value of gross added increased, as compared to 2012 accordingly by 5% in 2013, and estimated reduction by 10.7% in 2014. As compared with 2004, the value added for agriculture was higher by 50% in 2013, and estimated as 33% in 2014.

Table 8. Economic results in agriculture in 2014, as compared to selected years (current prices, million PLN)

Specification	2004-2007	2008-2011	2012	2013	2014
1. Agricultural sector production, (A+B+C)	66030	81237	97078	99362	96424
A plant and animal production	59842	74173	91173	93904	92556
B subsidies to products	4064	4668	3310	2481	1313
C other production and services	2124	2396	2595	2977	2555
2. Indirect consumption	39071	50182	59330	59790	61093
3. Gross value added (1-2)	26960	31055	37748	39572	35330
4. Depreciation	5402	5873	6291	6487	6789
5. Net value added (3-4)	21558	25182	31457	33085	28542
6. Other taxes	1382	1372	2370	2419	2221
7. Other subventions	5727	11714	13048	16182	17022
8. Income from production factors (5-6 +7)	25903	35524	42135	46847	43343
9. Hired Labour Costs	2999	3804	3985	4455	4709
10. Lease Payments	384	462	304	305	248
11. Balance of interest paid and obtained	921	1172	1151	1203	1232
12. Agricultural Entrepreneur Income (8-9-10-11)	21599	30085	36695	40884	37154
13. Share of subsidies and subventions (B +7) in income in %	45.3	54.5	44.6	45.6	49.3

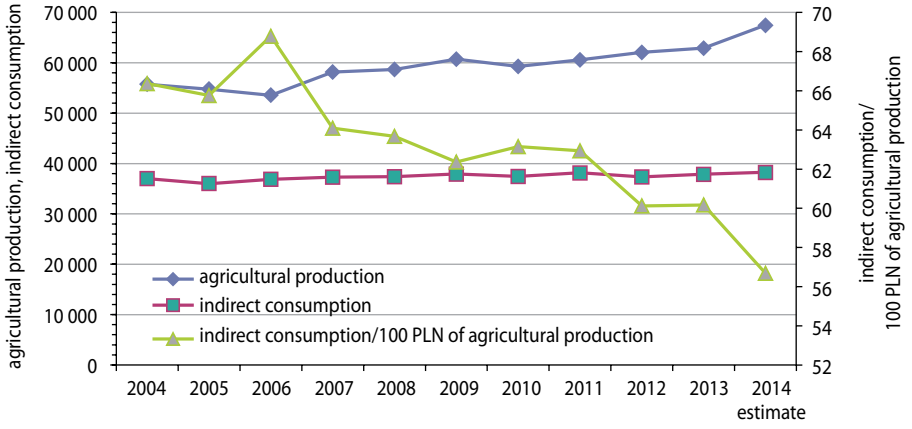
Source: own study on the basis of the Economic Accounts for Agriculture; Institute of Agricultural and Food Economics (verified on October 2015).

It is also worth mentioning that a 1.4% reduction in the value of agricultural production in 2014, as compared to the previous year should be associated with a 7.3% growth in agricultural production volume, and a 8.1% price reduction. The production value reduction was the result of an over 4.8% reduction of plant production values, which was the result of a ca. 12.5% decrease in prices in this branch, with a simultaneous growth in its volume by 8.8%. During that time, the value of animal production has increased by more than 2%, which was caused by a 5.7% growth in volume and a 3.4% decrease of prices. The reduction in agriculture income was also influenced by a growth of indirect consumption of over 2%, which was a result of a 4.5% increase in the value of fertilizers and an 8% increase in industrial fodder value, as well as a 16% increase in the costs of other services related to agriculture. In the first two cases, consumption of these funds has increased, whereas the prices for the latter services has increased in the audited period.

An increase in added production value in 2013, as compared to 2012, contributed to a 11.2% growth of income from production factors, i.e. work remuneration and capital involved in agricultural production. A substantial reduction in the value added in 2014 (by 13.7%), contributed to a reduction of income from production factors by 7.5%. A large role in the growth of income from production factors in 2013, was played by an increase in the value of other subventions by 24%. Also, according to results from 2014, the considerable decrease of income from production factors to the level of 43.3 billion PLN, was affected mainly by a reduction in the value added by 13.7%. An estimated increase of hired labour costs (by over 11%), as well as a small growth in the amount of lease payments and a deterioration of interest balance, did not adversely affect the own work income and own equity in 2013, which reached 40.8 billion PLN. Its growth was a consequence of a significant increase of income from production factors. On the other hand, in 2014, a 7.5% reduction of income from production factors, coupled with an and almost 6% increase of hired labour costs had an adverse effect on the income value of agricultural entrepreneurs, which was reduced by 9.1%. In 2014, according to GUS estimates, employment in Polish agriculture was around 1937.1 thousand full time workers, and entrepreneur income per 1 full time employee amounted to 20.08 thousand PLN/person. The income was almost 2 times higher than in 2004.

The significant growth of income in 2004-2014 has been achieved, as a result of an improvement in the effectiveness of agricultural production. As a result, per every 100 PLN of agricultural production, an estimated 56 PLN of outlays (indirect consumption) were used in 2014. In 2004-2013 it was on average above 66.8 PLN (Fig. 13).

Figure 13. Agricultural production and indirect consumption value (in manufacturer prices* from 2005)



** producer prices are prices received by the manufacturer, excluding product subsidies.*
Source: own study on the basis of the Economic Accounts for Agriculture available from Eurostat; (estimate, October 2015).

Food consumption

Growth dynamics acceleration of actual income of the population after integration, resulted in changes in the level and structure of food consumption. Along with the population's income increase, the share of expenses for food has decreased. In 2013, this share was estimated as 24.4%, and was lower by 2.5% than in 2004. At the same time we witness multidirectional changes in consumption of particular foodstuffs. The favourable changes include the growth in milk and dairy product consumption, as well as vegetable fats, and poultry. The growth in pork and poultry consumption caused the balance meat consumption in 2014 to go up by 3.5 kg/inhabitant, as compared to 2013 (tab. 9).

Unfavourable changes include the lack of any clear progress, and even a regress in fruit and vegetable consumption, despite a considerable improvement in the market offer and availability. It is worth adding however, that the consumption growth of sugar is affected by the growing consumption of confectioneries, while direct sugar consumption in households is systematically decreasing.

Table 9. Consumption of selected foodstuffs in Poland per inhabitant

Specification	2004	2005	2010	2011	2012	2013	2014
Cereal products* kg	119	119	108	108	108	108	107.5
Potatoes (kg)	129	126	110	111	107	102	103
Vegetables (kg)	111	110	106	104	103	102	104
Fruit (kg)	55.0	54.1	44.0	42.0	46.0	46.0	48.0
Meat and offal (kg)	71.8	71.2	73.7	73.4	72.1	67.5	71.0
Fish and fish products**(kg)	12.4	11.5	13.1	12.4	11.7	12.2	13.2
Edible Fats (kg)	30.7	30.5	32.1	32.0	32.1	31.8	32.7
including butter	4.4	4.2	4.3	4.0	4.1	4.1	4.1
vegetable fats	19.7	19.7	21.5	21.9	22.2	22.6	23.0
Milk and dairy products*** (l)	174	173	189	194	193	206	205
Chicken Eggs (pcs.)	211	215	202	172	140	148	148
Sugar (kg)	37.6	40.1	39.9	39.4	42.5	41.9	43.5

** in equivalent cereal grains, * in equivalent live weight, *** in equivalent raw milk*
Source: Demand for food no. 16, IERiGŻ-PIB, Warsaw 2015.

The improvement in alimentation quality in Poland is also proven by the regular decrease in bread, cereal product, potatoes consumption, and an increase in consumption of refined and highly processed food. Still however, the alimentation level in Poland measured by animal, vegetable and fruit consumption is lower than the EU-15 average, and is typical of north European countries of low-level income. The diet average quality of the average Pole is significantly different than the Mediterranean model, considered by dieticians as the most health-beneficial.
Generally however, in 2014, market conditions for consumers were a lot more beneficial than in 2013. The improvement in the population's income, positive changes on the labour market, supply increase and a decrease in absolute food prices, resulted in stimulating demand for food. This was expressed in a growth in meat, fruit and vegetables, fish, vegetable fats and sugar consumption, as compared to 2013 (tab. 9).

AGRICULTURE IN REGIONS

Polish agriculture is characterized by a large differentiation in the regional configuration, determined by a number of factors, both agri-climatic and socio-economic. The agri-climatic group is comprised of i.a.: soil quality and abundance, climatic conditions (vegetation period duration, precipitation quantity), terrain, water conditions, etc. A synthetic index illustrating regional diversity of the abovmentioned conditions, is the, prepared by IUNG-State Research Institute in Puławy, Agricultural Production Area Quality INDEX (pol. Wskaźnik Jakości Rolniczej Przestrzeni Produkcyjnej – WJRPP). The values of ratios in different regions of the country, differ significantly – from the most beneficial in the Opolskie province (81.6), to the least favourable in the Podlaskie province (55.0). On the whole, the WJRPP ratio is higher in western Poland than in the eastern and southern regions. Regional differences also apply to the socio-economic sphere: agricultural land (UR) structure, holdings structure, forms of land ownership, tradition and culture, and the possibilities to sell agricultural produce (processing plant location, urban agglomerations, national borders, etc.).

The quality of agricultural production area, holding structure and location relative to target markets result in large regional differences with regard to production intensity. The agri-climatic conditions, expressed by the WJRPP index, and the increase in mineral fertilizer consumption, resulting in yield increases, are very strongly interconnected. The highest yields in plant production are acquired in western and northern provinces, with a higher number of commercial holdings utilizing intensive production methods. An expression of intensive production is the large proportion of industrial plants in the sowings structure (15-20%), high consumption of crop-yielding measures (e.g. mineral fertilizers), and a great capital involvement in production (e.g. work mechanization). In the Opolskie and Dolnośląskie provinces, the consumption of mineral fertilizers was accordingly 188.8 and 170.3 kg NPK/ha of UR, as compared to the national average of 134.2 kg NPK/ha of UR. In the eastern and southern areas yields remain lower, due to the indicated highly fragmented holding structure, and relatively worse soil-climatic conditions (e.g. shorter vegetation period, light, sandy soils). As a result, a lot of small agricultural holdings uses extensive and labour-intensive methods, with products mostly intended for own needs and direct sales. Mineral fertilizer consumption in the south-eastern regions of Poland is 82.0-126.5 kg NPK/ha of UR (tab.10).

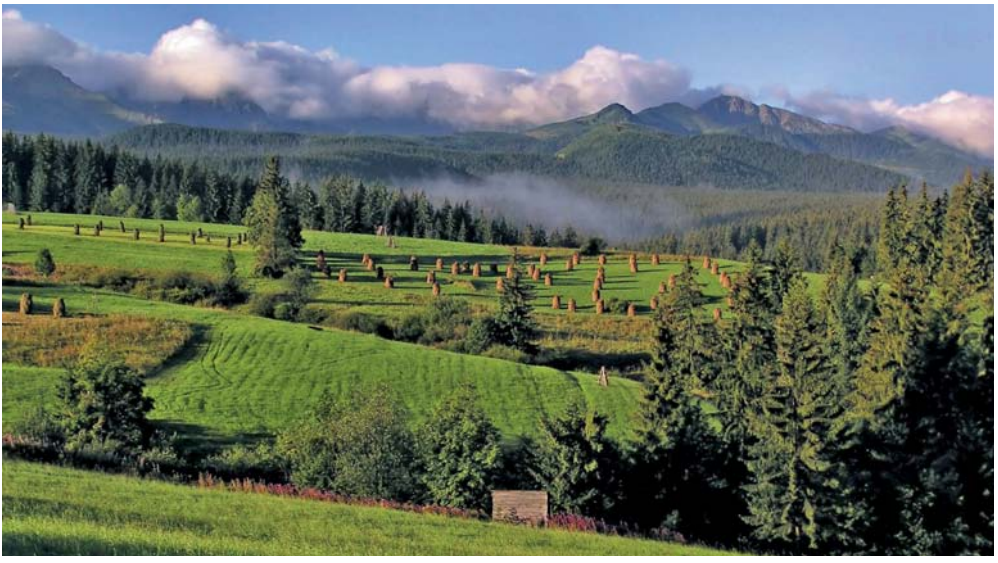
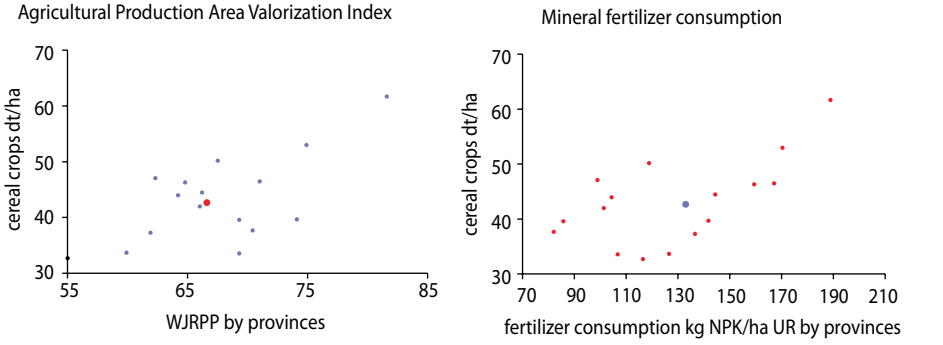


Table 10. The quality of agricultural production area, mineral fertilization and sowing structure share of cereals, potatoes and industrial plants

Province	WJRPP* [item]	Fertilizer Consumption [kg/ha of UR,]		Share in the sowing structure [%]		
		mineral	calcium	cereals	potatoes	industrial
Dolnośląskie	74.9	168.9	86.8	57.0	2.0	20.3
Kujawsko-Pomorskie	71.0	166.2	63.1	55.8	1.4	16.5
Lubelskie	74.1	140.4	34.7	69.4	1.9	10.1
Lubuskie	62.3	98.0	44.7	59.9	1.1	13.8
Łódzkie	61.9	135.6	39.8	74.6	4.7	3.8
Małopolskie	69.3	84.6	26.5	65.8	8.0	3.1
Mazowieckie	59.9	125.4	33.0	68.1	2.7	4.3
Opolskie	81.6	188.0	97.0	60.5	1.4	20.8
Podkarpackie	70.4	80.1	18.9	65.9	7.9	7.6
Podlaskie	55.0	115.7	21.2	64.5	1.6	1.7
Pomorskie	66.2	142.8	64.6	64.2	3.0	16.0
Śląskie	64.2	138.3	51.0	70.2	2.7	8.7
Świętokrzyskie	69.3	105.8	16.5	70.9	4.5	3.8
Warmińsko-Mazurskie	66.0	100.2	43.8	60.8	1.0	13.6
Wielkopolskie	64.8	158.2	53.8	64.1	2.1	11.0
Zachodniopomorskie	67.5	117.3	85.6	57.8	1.3	20.7
Poland	66.6	132.9	47.9	64.3	2.6	11.0

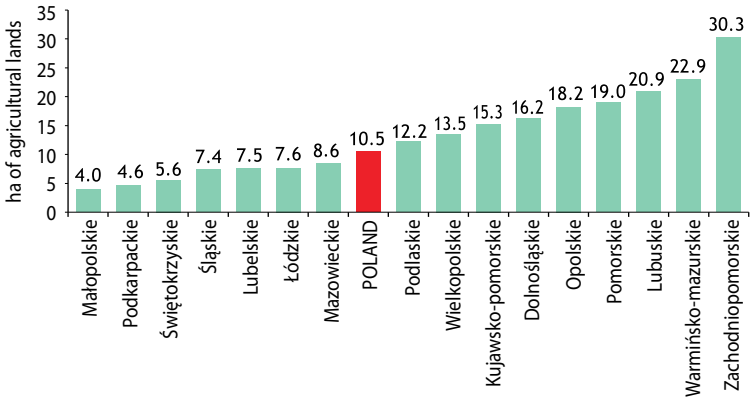
WJRPP – Waloryzacja Jakości Rolniczej Przestrzeni Produkcyjnej (Agricultural Production Area Valorization)
industrial=sugar beets and rapeseed,
Source: Study of the IERiGŻ-PIB, data from GUS, IUNG-PIB.

Figure 14. Impact of agricultural production area quality and mineral fertilizing on cereal yields



Note: marked points in the charts indicate average values for Poland.
Source: Study of the IERiGŻ-PIB, data from GUS.

Figure 15. Average area of agricultural land in an agricultural holdings in 2014



Source: Study of the IERiGŻ-PIB, data from ARiRM
http://www.arimr.gov.pl/dla-beneficjenta/srednia-powierzchnia-gospodarstwa.html., access date 10.08.2014.

Table 11. The share of provinces in the national in sowings area in 2014, (in %)

Province	Average holding [ha]	Share in the national cultivation area [%]				
		sowings	cereals	potatoes	sugar beets	rapeseed
Dolnośląskie	15.5	7.1	6.3	5.6	8.8	13.9
Kujawsko-pomorskie	16.2	8.9	7.7	5.0	18.9	12.2
Lubelskie	7.7	10.1	10.9	7.3	17.4	7.5
Lubuskie	19.2	2.7	2.5	1.1	0.8	3.9
Łódzkie	7.7	7.1	8.2	12.9	2.9	2.3
Małopolskie	3.9	2.8	2.9	8.8	0.5	0.9
Mazowieckie	9.0	11.5	12.1	12.2	6.0	4.1
Opolskie	19.6	4.2	3.9	2.3	6.6	8.1
Podkarpackie	4.4	3.1	3.1	9.4	1.8	2.2
Podlaskie	13.6	6.1	6.1	3.8	0.0	1.1
Pomorskie	18.5	5.5	5.5	6.5	4.6	8.7
Śląskie	6.5	2.6	2.8	2.7	0.8	2.3
Świętokrzyskie	5.5	3.1	3.5	5.5	2.0	0.9
Warmińsko-mazurskie	24.4	5.6	5.3	2.1	1.6	8.0
Wielkopolskie	14.2	14.1	14.1	11.7	21.4	12.5
Zachodniopomorskie	28.8	5.7	5.1	2.9	5.7	11.6
Poland	10.3	100.0	100.0	100.0	100.0	100.0

Source: Study of the IERiGŻ-PIB, data from GUS.

Table 12. Yields of major crops per province in 2014, (dt/ha)

Province	Cereals			Potatoes	Sugar beets	Rapeseed
	total	wheat	rye			
Dolnośląskie	53.0	54.0	36.8	294	752	33.0
Kujawsko-pomorskie	46.5	52.4	32.5	272	619	34.9
Lubelskie	39.7	45.6	30.4	282	610	29.5
Lubuskie	47.1	54.5	37.0	313	768	36.0
Łódzkie	37.3	43.9	28.7	291	686	33.2
Małopolskie	39.6	39.0	29.4	250	834	34.1
Mazowieckie	33.7	38.9	26.6	247	626	31.8
Opolskie	61.7	65.7	40.7	377	880	39.4
Podkarpackie	37.7	37.6	27.4	290	739	28.5
Podlaskie	32.7	36.1	26.2	224	602	32.2
Pomorskie	44.5	57.6	33.7	297	666	36.7
Śląskie	44.0	48.4	30.7	300	938	32.9
Świętokrzyskie	33.6	37.4	25.9	278	737	30.6
Warmińsko-mazurskie	42.0	48.2	33.1	251	555	30.3
Wielkopolskie	46.3	52.1	33.5	277	699	36.0
Zachodniopomorskie	50.2	59.6	42.4	309	726	37.5
Poland	42.7	49.7	31.5	278	683	34.4

Source: Study of the IERiGŻ-PIB, data from GUS.

In 2014, the average area of agricultural lands Polish agricultural holdings amounted to 10.5 ha[1]. Despite the continuing restructuring processes, the differences in agricultural production concentration in Poland are quite profound. The largest area-wise agricultural holdings can be found in northern and western regions where many large-scale entities operate, established as a result of ownership transformations and restructuring of state-owned agricultural holdings (PGR). As a result, the average area of an agricultural holding in these regions is: Zachodniopomorskie (30.3 ha), Warmińsko-Mazurskie (22.9 ha), Lubuskie (20.9 ha) and Pomorskie (19 ha). A different situation can be observed in the Małopolskie (4.0 ha), Podkarpackie (4.6 ha) and Świętokrzyskie (5.6 ha) provinces, where the fragmented holding structure is historically conditioned, and the production concentration processes take a very long time.

Agri-climatic conditions and location relative to target markets determine the structure of plant and animal production. Polish agriculture is characterised by a highly discernible specialization of agricultural production in the regions. Rapeseed cultivations are concentrated in six provinces (Dolnośląskie, Kujawsko-Pomorskie, Opolskie, Pomorskie, Wielkopolskie and Zachodniopomorskie), whose total share in the national cultivation area in 2014 amounted to 67%. The highest rapeseed yields were recorded in Opolskie (39.4 dt/ha) and Zachodniopomorskie (37.5 dt/ha) provinces, and the lowest in Podkarpackie 28.5 dt/ha) (tab. 11). A clearly visible regional specialization is also present in sugar beet cultivation. In 2014, five provinces (Dolnośląskie, Kujawsko-Pomorskie, Lubelskie, Opolskie and Wielkopolskie) together held ca. 73% of the national acreage of sugar beet cultivations. Sugar beet yields were highly diverse regionally, from 555 dt/ha in the Warmińsko-Mazurskie province, to 938 dt/ha in the

[1] The amount refers to farms with the total area of 1 ha and larger.

Śląskie province. Potatoe production is concentrated in the following regions: Lubelskie, Łódzkie, Małopolskie, Mazowieckie, Podkarpackie and Wielkopolskie, whose share in the national cultivation area amounted to 62%. The highest potatoe yields were recorded in the Opolskie (377 dt/ha) province, and the lowest in Podlaskie (224 dt/ha) (tab. 12). The production of cereals is also characterized by a concentration in the regional system, in spite of a relatively large cultivation tolerance to soil-climatic conditions, universality of their application, and hence small dependence on specific sales markets (e.g. the processing industry). In 2014, cereal cultivation was concentrated in the following provinces: Dolnośląskie, Kujawsko-Pomorskie, Lubelskie, Łódzkie, Mazowieckie, Podlaskie, and Wielkopolskie, whose total share in cultivation area amounted to ca. 65%. It should be noted however, that the greatest share in cereal cultivation is had by the provinces largest area-wise: Mazowieckie (12.1%) and Wielkopolskie, (14.1%). A different situation can be observed in small provinces (Śląskie, Małopolskie, Lubuskie and Podkarpackie), whose share in the national area of cereal cultivation only ammounts to ca. 3% each. The highest cereal yields, including corn, were recorded in the Dolnośląskie (53.0 dt/ha) and Opolskie (61.7 dt/ha) provinces, and the lowest in Podlaskie (32.7 dt/ha).

Animal production also shows significant differences in the territorial system, both in terms of production directions, as well as its concentration and intensity. In 2014, a growing tendency persisted of cattle livestock in Poland, which increased by 1.3% to 5660 thousand heads. The number of cows shows a long-term decreasing trend, due to the restructuring processes and modernization of the dairy industry resource base. A decrease in the number of cows is compensated by increasing milk yields. In 2014, the number of cows was 2403 thousand heads.

Table 13. Number of animals per 100 ha of agricultural land (heads/100 ha)

Province	The share of permanent grasslands (TUZ) in agricultural lands%	Livestock in December 2014 [heads/100 ha of UR]			
		cattle	cows	swine	sows
Dolnośląskie	8,2	11,4	4,6	17,1	2,8
Kujawsko-pomorskie	7,4	47,2	15,1	123,3	11,8
Lubelskie	23,5	26,1	11,1	41,3	4,1
Lubuskie	5,3	18,1	7,0	38,0	3,2
Łódzkie	9,8	48,5	21,7	98,8	9,0
Małopolskie	16,8	31,4	16,1	32,1	4,7
Mazowieckie	34	60,8	28,4	49,5	4,5
Opolskie	3,2	23,6	8,9	81,2	7,5
Podkarpackie	18,1	16,5	9,7	30,5	3,4
Podlaskie	17,7	87,9	41,8	31,3	2,8
Pomorskie	5,2	27,5	9,9	99,5	9,8
Śląskie	5,4	32,4	12,5	63,3	6,0
Świętokrzyskie	9,6	32,8	12,8	45,8	5,8
Warmińsko-mazurskie	11,9	45,9	20,8	49,4	5,0
Wielkopolskie	16,3	49,5	15,7	226,5	16,4
Zachodniopomorskie	7,4	12,4	4,9	36,1	3,6
Poland	21,4	40,7	17,0	76,6	6,9

TUZ – permanent grassland, UR – agricultural lands,
Source: Study of the IERiGŻ-PIB, data from GUS.

and was 1.6% less than the year before. Cattle and cow rearing is concentrated mostly in provinces: Podlaskie, Wielkopolskie, Mazowieckie, Kujawsko-pomorskie, Łódzkie and Warmińsko-mazurskie, whose total share in the national stock is ca 74.5%. The aforementioned regions specialize in the production of milk, which very strongly connected with the production of cattle. The cattle stock in the discussed regions per 100 ha of UR, ranges from 43 heads in Warmińsko-mazurskie, to 87 heads in Podlaskie. The smallest cattle density can be observed in provinces: Dolnośląskie, Lubuskie and Zachodniopomorskie (11-17 heads/100 ha of UR) (tab. 13).

In 2007-2013, Poland witnessed a significant decrease in swine numbers. In 2014, the decreasing trend has been halted, due to the livestock numbers increase by 2.3% to 11.2 million heads. Regions specializing in swine production are provinces: Wielkopolskie, Kujawsko-Pomorskie, Łódzkie, Mazowieckie and Pomorskie, whose total share in the national stock is ca. 75%, with Wielkopolskie, ca. 35%. The largest swine density per 100 ha of UR, can be observed in provinces Wielkopolskie and Kujawsko-pomorskie, accordingly 227 and 112 heads. Provinces holding a small share in swine rearing are: Dolnośląskie, Lubuskie, Podkarpackie, Podlaskie, and Zachodniopomorskie, where the density is 17-38 heads/100 ha.

The diversity of agriculture in individual provinces is also reflected in the value and size of purchases of basic products per 1 ha of agricultural land. In 2014, the average value of basic products purchases per 1 ha of agricultural land, amounted to 4.1 thousand PLN. Significant differences have been observed between provinces – from 1.7 thousand/ha in the Podkarpackie Province and 1.9 thousand/ha in Małopolskie, up to 5 thousand PLN/ha in Kujwsko-pomorskie and Mazowieckie, and 6 thousand/ha in the Wielkopolskie province.

Table 14. Purchase of basic agricultural products from 1 ha of UR in 2014

Province	Cereals	Potatoes	Swine	Cattle	Poultry	Milk
	kg/ha	dt/ha	kg/ha	kg/ha	kg/ha	l/ha
Dolnośląskie	2053	220	13	15	84	171
Kujawsko-pomorskie	1128	159	288	55	123	734
Lubelskie	515	24	86	25	70	393
Lubuskie	1057	35	67	13	259	214
Łódzkie	428	119	248	76	190	818
Małopolskie	150	27	87	46	68	278
Mazowieckie	419	32	105	55	316	1157
Opolskie	2159	98	147	20	98	502
Podkarpackie	445	48	61	13	58	211
Podlaskie	174	145	75	75	101	1925
Pomorskie	1151	305	296	30	188	407
Śląskie	556	13	146	51	249	547
Świętokrzyskie	212	7	115	60	116	345
Warmińsko-mazurskie	906	12	107	29	225	828
Wielkopolskie	1064	232	323	86	240	856
Zachodniopomorskie	1569	132	65	10	167	189
Poland	849	111	151	46	172	709

Source: Study of the IERiGŻ-PIB, data from GUS.

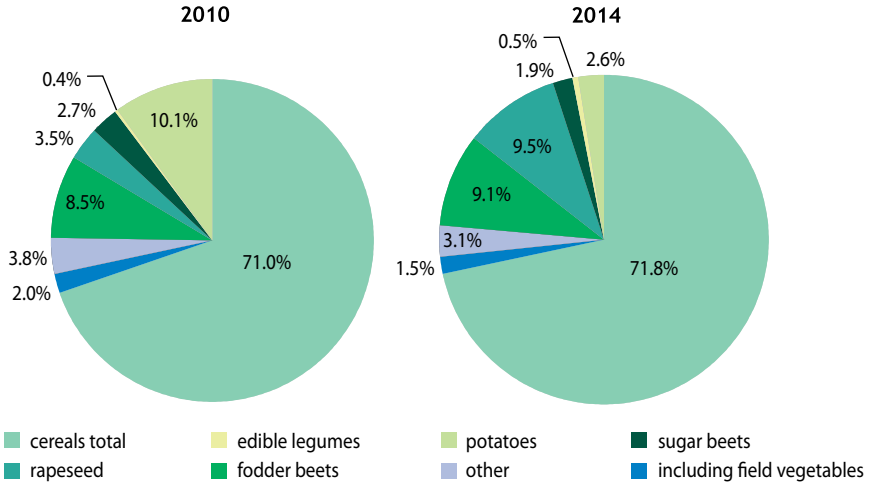
The largest cereal purchases have been recorded in provinces: Dolnośląskie, Kujawsko-pomorskie, Opolskie, Pomorskie, Wielkopolskie and Zachodniopomorskie, whose total share in the purchase ammounted to 67%. In relation to the total acreage of arable lands, the largest cereal purchases took place in Dolnośląskie and Opolskie – ca. 2.1 t/ha each, and the smallest in Podlaskie – 0.2 t/ha. In the purchase of potatoes, provinces: Dolnośląskie, Kujawsko-pomorskie, Pomorskie, and Wielkopolskie, had a total share of ca. 63%. As per area unit, the largest quantities of potatoes focus in Pomorskie (305 dt/ha), Wielkopolskie (232 dt/ha) and Dolnośląskie (220 dt/ha) provinces. The smallest purchase of potatoes per hectare of cultivations was recorded in the Świętokrzyskie and Warmińsko-mazurskie provinces – accordingly 7 dt/ha and 12 dt/ha (tab. 14).

Milk production and related cattle production are concentrated in six provinces: Kujawsko-pomorskie, Łódzkie, Mazowieckie, Podlaskie, and Warmińsko-mazurskie, whose share in milk and cattle purchases is ca. 77%. Calculated per hectare of agricultural lands, the largest purchases were recorded in the Podlaskie (1.925 l/ha) and Mazowieckie (1157 l/ha) provincess, and the smallest in Dolnośląskie (171 l/ha) and Zachodniopomorskie (189 l/ha). Large purchases of cattle from 1 ha of agricultural land are present in Wielkopolskie (86/ha), Łódzkie and Podlaskie (75 kg/ha) provinces. In the western and southern regions, the purchase of cattle from an area unit is only (10-13 kg/ha).

Swine purchases are dominated by provinces: Kujawsko-pomorskie, Łódzkie, Mazowieckie, Pomorskie and Wielkopolskie (together ca. 70%), with Wielkopolskie, ca. 26%. In the aforementioned regions, swine purchases per hectare are one of the largest in the country (248-323 kg/ha). The smallest swine purchases were recorded in the Dolnośląskie province – 13 kg/ha.

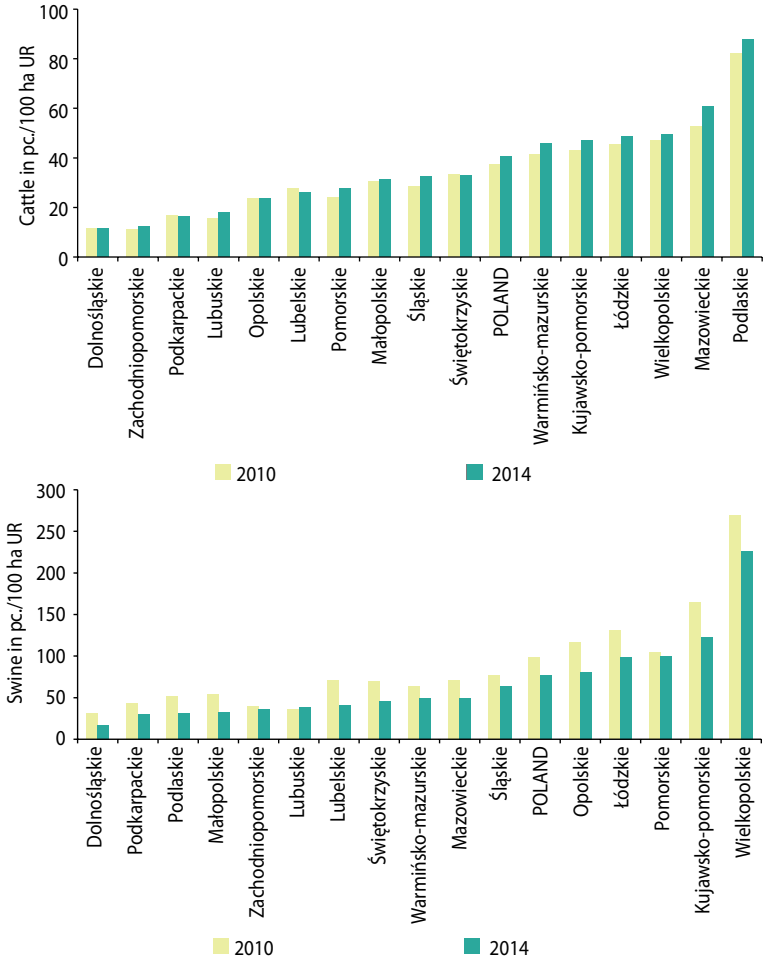
Poultry livestock purchases are concentrated in three provinces: Mazowieckie, Wielkopolskie and Warmińsko-mazurskie, whose total share is 50%. In 2014 large purchases of poultry livestock calculated per hectare of agricultural lands, were recorded in provinces: Mazowieckie (316 kg/ha), as well as Lubuskie, Śląskie and Wielkopolskie (ca. 250 kg/ha each). Provinces of small significance in poultry livestock purchases are Podkarpackie (58 kg/ha) and Lubelskie (70 kg/ha).

Figure 16. Sowings structure in Poland



Source: Study of the IERiGŻ-PIB, data from GUS.

Figure 17. Cattle and swine livestock per 100 ha of agricultural land



Source: Study of the IERiGŻ-PIB, data from GUS.

PLANT PRODUCTION, SELECTED MARKETS AND PROCESSING BRANCHES

Improvement of national sources of vegetable protein

Since 2011, the Minister of Agriculture and Rural Development supervises the realization of a long-term scientific-implementation plan Improving the State vegetable protein resources, its production, trade, and use in fodders (*Ulepszanie krajowych źródeł białka roślinnego, ich produkcji, systemu obrotu i wykorzystania w paszach*). According to the assumed estimates, the program's purpose is to help increase interest in and use of national legume varieties in fodder production. Program realization is coordinated by the Institute of Soil Science and Plant Cultivation (IUNG) – State Research Institute (PIB) in Puławy. The principal contractors of the program are state scientific institutions.

The program is realized based on the following priorities:

- increase in stability and quality of high-protein leguminous plant yields;
- new trends in agro-engineering of leguminous plants, and ways of increasing cultivation profitability;
- state sources of vegetable protein in feeding monogastric animals;
- economic conditions for the development of production, infrastructure, market and trade system, as well as profitability of use of leguminous plants, as fodder in Poland;
- production high quality fodder from permanent grasslands.

Works began in 2011, aim to improve cultivated plants with regard to increasing and stabilizing yields, and improving seed quality. In the last year of program realization i.e. 2015, the genetic-rearing test cycle shall be concluded, along with a verification of various cultivation schemes of peas, lupins, field beans, and quality tests of fodder components for their usefulness in monogastric animal alimentation. In the period between August 2011 and December 2014, program contractors have obtained interesting results. The most important are as follows:

- methods have been prepared, shortening the process of cultivation of a variety of peas, allowing yields of 3-4 generations of per year, and an evaluation was carried out pertaining the degree of evenness of plants obtained from such strains;
- the assessment of productivity and economic effects of low, average and high-volume lupin cultivations point out that yields from simplified cultivation schemes for all examined species, are similar to those from plough tillage;
- the cost of production of 1 kg of vegetable protein was the lowest in simplified cultivation, and fluctuated between 1.95 PLN per kg of blue lupin, up to 2.35 PLN for yellow lupin. These costs are lower than the price of 1 kg of protein from post-extraction soy meal;
- the assessment of leguminous plants cultivation as precursor crops for winter wheat, winter rapeseed and winter triticale for various types of cultivations, indicates that cereals in all types of post-legume cultiva-

tions yielded substantially higher, with traditional and simplified cultivations yields were similar, in direct sowing they substantially lower (up to 10%);

- zero tillage cultivations, particularly direct sowing are favourable for greater populations of soil microorganisms, as compared to traditional tillage cultivations;
- the introduction of leguminous plants into crop rotation with differing participation of cereals, is favourable for very high cereal and rapeseed yields, at a reduced use of nitrogen fertilizers;
- fungal pathogens were indentified, living on seeds of leguminous plants, originating from various regions of the country and a bank of pathogens was created for the purposes of selecting existing varieties to the cultivation region, as well as resistance breeding of leguminous plants;
- point sowing of leguminous plants, may reduce sowing standards without reducing yields;
- the suitability assessment of leguminous plant seeds rapeseed products and cereal decoctions in monogastric animal alimentation in the production experience points out that animals fed with a balanced mixture, with the use of national sources of vegetable protein, were characterized by similar production results, as swine fed with a complete feed mix containing post-extraction soy meal;
- test results concerning rearing chickens for slaughter indicate that the level of yellow lupin and pea, in the feed mix not causing a deterioration of chicken rearing, should remain at a level of 20% for yellow lupin and 15% for white lupin;
- it was demonstrated that Pekin ducks and white Kołudzkie geese fed a balanced concentrate based solely on national sources of vegetable protein, were characterized by a higher body mass and lower feed consumption coefficient, as compared to ducks and geese fed with concentrate containing post-extraction soy meal;
- it was demonstrated that swine fed with concentrates containing vegetable protein from domestic sources can be characterized by greater meat content;
- pilot tests have been conducted of introducing the developed model of vertical entity integration relations in the scope of the development of pork and poultry production with the use of fodder components based on domestic leguminous plant protein, indicating that the most convenient formula for animating market development of domestic protein crops is a cluster product structure as a plane of cooperation of completely independent companies, commencing joint ventures in the economy;
- a composition has been prepared, of both species and varieties of sample mixes for renovation of permanent grasslands adjusted to soil and climatic conditions;
- an analysis of nutrition costs for an increase of 1 kg of body mass of livestock, showed a large diversity' the smallest value was observed in the group fed with haylage containing red clover.

Considering the results developed in the long-term program, as well as taking account of the issue of leguminous plants, in a new Common Agricultural Policy 2020 and trends observed in the European Union for searching alternative sources of fodder protein, the Ministry of Agriculture and Rural Development has prepared a design of a long-term program for the period 2016-2020 under a working name *Increasing the use of domestic feed proteins for high-quality animal production in sustainable development* (*Zwiększenie wykorzystania krajowego białka paszowego dla produkcji wysokiej jakości produktów zwierzęcych w warunkach zrównoważonego rozwoju*).

It was assessed that genetic tests should be continued, supporting rearing of domestic legume varieties, as well as agro-engineering tests with the permanent use of simplified cultivation methods. A new species included in the program is the soy bean. So far, the results obtained in qualitative and digestive studies of domestic leguminous plant resources indicate a greater potential for livestock alimentation, as compared to the information contained in the subject literature, therefore, additional emphasis shall be put on disseminating results obtained in the program, along with further implementation works in agricultural holdings, reaching a possibly broadest group of recipients (fodder factories, swine and poultry producers) in order to build a recognizable trademark, which will be an additional factor stimulating cultivation, and will guarantee supply of a suitable amount of uniform resource for fodder production.

In a new financial perspective for 2014-2020, it is necessary to maintain payments in the sector of leguminous plants and small-seeded fabaceae that have been granted since 2010. Subsidies to high-protein crops shall be granted a per-area scheme, for selected plants. Subsidies shall be granted for cultivation in the main harvest pure and mixed sowing (except for mixes with plants other than those entitled to subsidies). For the common and fodder vetch varieties, payments shall be granted to their cultivations with supporting crops. New species entitled to subsidies are: honey clover, grass pea and fodder vetch.
The maximum area of high-protein crop cultivation eligible for subsidies in a holding is 75 ha.
For 2015, the amount of subsidies for high-protein crops is ca. 67.5 million EURO.

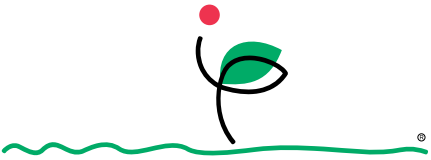
Return of old varieties

Old varieties of vegetables and agricultural plants, sometimes remembered by adults from their childhood, holidays in the country, often remembered with a degree of fondness by the eldest village inhabitants, are making a comeback into fields, kitchen gardens, and also onto the tables of Poles interested in healthy, tasty and nutritious food.
The Act on Seeding of 9 November 2012 enabled registration of such crops as regional and amateur varieties, thus permitting their seeds for trade. Should persons interested in their registration appear, soon stores will be selling seeds of wolska and lubartowska onion, Kamienna Głowa cabbage, Malinowe Serce tomatoes, schallot, tubers of the famous Pierwiosnek potato variety, and many more.
For persons interested in the topic, we recommend the Information on Old Varieties of Agricultural and Horticultural Plants Present in Poland, and Their Introduction for Cultivation as Regional and Amateur Varieties – available for downloaded at http://www.minrol.gov.pl/ (*Informator nt. starych odmian roślin rolniczych i ogrodniczych występujących na terenie Rzeczypospolitej Polskiej i możliwościach ich introdukcji do uprawy jako odmiany regionalne i amatorskie*). As assesses by dr Jacek Szklarek, the President of the *Slow Food Polska Association*, "the publication in a clear manner presents both to scientists, farmers, planters and consumers, the issues of biodiversity and concern about its retention". The publication specifically aimed for interested persons, who rediscover old, valuable varieties and their exceptional health qualities and flavour. Traditional varieties deserve the attention of organic farmers, who are looking for crops with low-soil needs and resistant to diseases. It is worth remembering that among traditional vegetable and agricultural crop varieties suitable for extensive cultivation conditions, varieties with such characteristics are the majority. Also, their exceptional flavour is an additional argument for supportes of their cultivation.
Emphasis should also be put on the fact that farmers who decide on cultivating regional and amateur varieties, shall be eligible to receive financial support from the Rural Development Programme for 2014–2020, agri-enviromental-climate actions, Package 6. The preservation of endangered genetic resources of plants in agriculture, in the amount of 750 PLN per every hectare of cultivation. Also, farmers preserving regional or amateur varieties shall be eligible for subsidies in the amount of 1000 PLN per each hectare of seed plantation owned.
Another interesting proposition from the Act on Seeding is a possibility to recreate nature-valuable permanent grasslands (TUZ) with the so-called "seeding mixes of pasture plants for use environmental protection". Reproductive material in mixes for creating and recreating plant communities, comes from natural and semi-natural meadows, located within the Natura 2000 areas, of the same habitat type as the target habitat. The use of mixes provides a number of benefits, such as: adjusting the botanical composition to a specific habitat, permanent effect of the created meadow, preservation of plant biodiversity and habitats of domestic fauna, and enriching natural landscape variety.
It is also worth remembering that mixes for environmental protection can also find a use in the city – on lawns, turning them into flower meadows, greenery strips near expressways.

Integrated plant production

Integrated plant production (IP) is a modern food quality system, which makes sustainable use of technical and biological progress in plant cultivation, protection and fertilizing, paying particular attention to health and environmental protection.

Participation in the IP system allows for obtaining healthy food of plant origin, with acceptable levels of residues of plant protection products, heavy metals, nitrates and other elements and harmful substances. As confirmation of the high quality of IP yields an IP certificate and trademark are issued.



Apart from marketing benefits, resulting from the sales of food of officially certified quality, there are a number of other arguments for IP implementation:

1) assumption consistency of integrated plant production system allows to discern that IP implementation at the present time will guarantee the fulfillment of the obligatory requirement of introducing principles of integrated plant protection;
2) obtaining the IP system certificate allows for a refund of parts of costs incurred, related to participation in the system and promotion under the Rural Development Progamme (PROW);
3) applying the IP principles allows the fulfillment of the requirements posed by the Cross Compliance System under direct payments regarding the protection of plants and food safety, introduced at 1 January 2011;
4) implementing IP in a holding is extremely important when confirming requirements relating to food safety becomes a necessity, both for the purposes of fruit and vegetable exports to third states, as well as intra-European commerce, including the Russian Federation. IP allows for the possibility to conduct production according to Russian standards. The main in element such a case are special plant protection programs developed by the Research Institute of Horticulture in Skierniewice;
5) IP also gives the possibility to fulfill to a large extent, food safety and environmental protection requirements under other, commercial quality systems required by e.g. large-area commercial chains.

The office lawfully responsible for supervision over the IP system is the Main Inspectorate of Plant Health and Seed Inspection. However, as is practiced in the organic agriculture system, certification has been entrusted to certifying entities authorized by the relevant Provincial Inspector for Plant Health and Seed Production. The condition

Table 15. Integrated Production in 2004-2014

Specification	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Number of certificates issued	811	1557	1891	1915	1 174	838	1068	1482	2465	2898	3067
Certified area (thousand ha)	6.45	9.29	10.92	10.60	7.48	5.64	7.59	10.75	15.44	18.32	17.73
Certified production (thousand t)	15.52	17.55	22.97	19.07	20.35	15.32	19.81	31.76	57.46	58.31	558.4

Source: PIORIN data.

for obtaining authorization is possessing accreditation with regard to certification of integrated plant production granted as per the procedure as provided by the Act of 30 August 2002 on The Compliance Assessment System (Journal of Laws 2014, item 1645, with later amendments) and ensuring inspection conducting, compliance with the requirements of integrated plant production by the people with adequate qualifications, including education and experience.

In 2014, provincial inspectors for plant health and seed production have authorized 5 certification entities: 2 – in Mazowieckie, 2 – in Małopolskie, and 1 – in Świętokrzyskie. 2014 was a transition year the new regulations. For this reason, the responsibilities of certifying entities were performed by provincial inspectors for plant health and seed production, on the basis of authorizations of the Chief Inspector of Plant Protection and Seed Production.

In 2004-2014, the certified area of integrated production increased almost threefold, and production almost 4 times. Additionally, in 2014, certifying entities transferred to provincial inspectors for plant health and seed production information regarding 111 certificates issued (including 76 apple and 30 carrots) for production equal to 23 864 tons. In 2014, 2953 notifications were received, expressing the intent to join the IP system. At the same time 3643 cultivations were reported to the IP system. This is due to the fact that producers can declare conducting cultivations for more than one species. The reported area was almost 22 thousand ha, of which more than 98% were orchards.

Seed production market

According to the data of the Main Inspectorate of Plant Health and Seed Inspection (PIORiN), 2014 saw a 0.2% increase in seed plantation area for all agricultural plants, as compared to 2013 (from 115.4 thousand ha to 118.8 thousand ha). This change was caused by a growth of seed plantation area of hard-seeded (by 38.9%) and small-seeded (by 3.5%) fabaceae, sugar forage beet (by 16.6%) and grasses (by 16%). In case of oil and fibrous plants, a significant 85% increase in seed cultivation areas was mainly caused, by a growth in production of white mustard and soybean. Considering that low viral pressure was observed in 2014, and thus a relatively low percent of disqualification, certified potato plantation area was increased by 10.2% reaching a level of 5.25 thousand ha. Also, a more than 11.1% decrease was recorded in the certified cereal cultivation area. It should be noted however that as compared to the beginning of the decade, i.e. in 2005, the total seed cultivations area was increased (agricultural plants and vegetables) by 48.4%.

The National Register of Varieties includes 2437 varieties of plants (as of April 2015). The share of foreign varieties in the Register for agricultural plants in 2014 was 51.4%. In 2014, 611 plant varieties were declared, including 94% of agricultural plants. The dominant species were: winter rapeseed, corn, winter wheat, sugar beet, spring barley, and winter rye.

According to experts estimations of the Central Statistical Office, the 2013/14 season, as compared to the previous period, saw a marginal increase in sales of seeds of basic cereals – by 0.53%. Farmers purchased 82.8 thousand t of certified wheat seeds, 12.7 thousand t of rye, 31.7 thousand t of barley, 9.6 thousand t of oats, and 34 thousand t of triticale. In comparison with season 2012/13, the sales of certified seeding material of rye, barley, oats, and triticale has decreased (accordingly by 6, 0.6, 4, 4.3, and 5.3%), while the consumption of certified wheat seeds increased by 5.9%. Additionally, the use of high quality seed-potatoes is systematically increasing, currently it is 0.9% higher, as compared with the previous season.

Cereal market

Cereal production is one of the main branches of Polish agriculture. With regard to cultivation area, Poland holds second place in the European Union, in terms of yields, it occupies third place behind France and Germany. The popularity of cereal production results from a relatively simple cultivation technology, ease of storage and sales, and mainly diverse uses of grains, which is mostly used for fodder. The supply-demand situation on the market is essential for of the entire food economy. The cereal sector largely influences the economic conditions of production on other markets, particularly swine and poultry livestock.

The national cereal production in 2014 was dominated by wheat, corn and triticale. Large share in the sowing area and yields of cereals was had by barley, rye and cereal mixes. The amount of cereal harvests varies yearly, which is mainly a result of yield variations, and to a smaller extent, acreage.

Total cereal cultivation area in Poland amounted to 7.5 million ha (similarly to 2013). Total cereal harvests reached a record level of 31.9 million tons, i.e. 12.3% more than in 2013, and 19.5% more than the average harvests from 2006-2010. Such a large harvest increase was a result of yielding improvements. They reached almost 4.2 t/ha, i.e. 12.3% more than in 2013, (including wheat, almost 5 t/ha, corn for grain 6.6 t/ha, barley and triticale – 4 t/ha, rye 3.2 t/ha).

National demand for cereals has for many years varied between 26 and 28 million tons. In the season 2014/15, the domestic cereal consumption was 27.7 million tons, as compared to 26.8 million tons in the previous season. The dominant position within the domestic consumption structure is held by pasturing (on average 16-18 million t). In the season 2014/15, grain consumption for fodder has increased (by 1.2 million t) due to the increase of poultry and pork production. Industrial consumption of grains has also increased, with a simultaneous slight decrease in consumption for alimentation purposes. Cereal consumption has been decreasing for many years, which is a result of i.a., changes in the general population's dietary habits. Of vital importance for management of domestic production in 2014 was the export of grains, which amounted to almost 5.5 million tons (increase by 33.6%). The largest increase was related to wheat exports, of which 3.2 million tons were sold abroad (increase by 89%). Such an intensive growth of wheat export was compensated by a drop in exports of other cereals (rye, barley, oats, and corn).

Sugar market

Poland is the third largest sugar manufacturer in the European Union, behind France and Germany. As a result of the sugar market reform in the European Union, sugar production was reduced, and since the economic year 2009/2010 sugar production quota in Poland is 1 405 608.1 tons. This amount is divided between 5 producers: Krajowa Spółka Cukrowa S.A, Pfeifer & Langen Polska S.A. and Pfeifer & Langen Glinojeck S.A., Südzucker Polska S.A. and Nordzucker Polska S.A.

The area of sugar beet cultivation has decreased from 286 thousand ha in 2005 (prior to the reform) to 196 thousand ha in 2014, and the number of planters – accordingly: from 70.7 to 35.0 thousand.

During the sugar beet campaign of 2014/15, 13.5 million tons of sugar beets were collected, which were used to produce 2046 thousand tons of sugar. Sugar beets harvests were 20% greater than in the campaign of 2013/14.

Beets were processed in 18 sugar refineries. The average price of sugar beets amounted to 125.9 PLN/t, and was 15.3% lower than in the previous year. The sugar beet campaign of 2014/15, lasted for an average of 122 days, and was 16 days longer than in the previous year. In the last three seasons sugar production was ca. 350-640 thousand tons higher than the production quota.

The achieved good production results are the effect of a high supply and good quality raw material. Also, a huge impact is had by positive effects of restructuring processes and the modernization of the national sugar industry. A result of the implemented changes and investments, was an improvement in technical and economic efficiency in the sector, wherein financial indexes significantly exceed the average values thereof in the food industry.

Sugar consumption in Poland in 2014 reached 1685 thousand tons, and was 3.4% higher than the year before. Its consumption increased in households (1.7%), food processing (4.1%). The average sugar consumption per 1 inhabitant increased by 2.6% to 43 kg.

Potato market

Potato production is systematically dropping in Poland in effect of declining demand, first of all from agriculture, and adjustment to the demand reported by the market. The share of potatoes in the sowing structure decreased to 2.6%, i.e.to the level similar to most EU member states.

The situation on the potato market in the season 2014/2015, was typical of a high-supply year. Despite smaller cultivation area, potato harvests in 2014 increased to 7.4 million tons (by 4.4%), as a result yield improvements by 31.8%.

Table 16. Potatoes cultivation area, yields and harvests

Specification	2001-2005	2006-2010	2011	2012	2013	2014
Cultivation area						
million ha	0.81	0.53	0.41	0.37	0.35	0.27
Changes (%)	-37.1	-35.4	1.4	-8.7	-9.6	-20.7
Crops t/ha	18.1	18.8	23.0	24.4	21.1	27.8
Changes (%)	-0.1	3.9	9.0	5.2	-12.8	31.8
Harvests in million tons	14.6	9.9	9.4	8.7	7.1	7.4
Changes (%)	-38.2	-32.3	10.8	-8.7	-21.4	4.4

Source: Potato market condition and perspectives, IERiGŻ-PIB, Warsaw 2014; Agriculture in 2014 Central Statistical Office (GUS), Warsaw 2015.

Yield increase resulted in a significant growth in supply. Considering the potato prices' susceptibility to supply variations, the consequence was a decrease in prices. The average purchase price of edible potatoes (excluding early season) dropped by 19.3%, to a lesser extent purchase prices of industrial potatoes also dropped (by 7.9%).

The greatest share of potatoes in the sowing area in 2014 was recorded in provinces: Łódzkie (35 thousand ha – 12.6%), Mazowieckie (34 thousand ha – 12.4%), Wielkopolskie (32 thousand ha – 11.5%), Podkarpackie (26 thousand ha – 9.5%). The smallest share (below 2%) was recorded in provinces: Lubuskie, Opolskie and Warmińsko-mazurskie.

Domestic potato demand reported by the market has fluctuated in recent years between 4.0-4.2 million tons, of which 1.5-1.9 million tons underwent industrial processing. For starch production, the laundering industry consumes 460-700 thousand tons annually, depending on potato prices and the economic situation on the starch market. Non-processed potato consumption is decreasing. The 3-4 million tons of unpurchased potatoes are consumes in households on own needs, as seeding material, or as fodder.

Rapeseed market

Rapeseed harvests in Poland are characterized by great variability. It results from yield and sowing area fluctuations. The variability of winter rapeseed cultivation in Poland is heavily impacted by its sensitivity to temperature drops and, as a result crop losses caused by freezing.

Poland's Accession to the European Union, and EU policy regarding biofuels and renewable energy were a strong impulse for rapeseed cultivation and processing. Rapeseed production became a developing branch of plant production. In 2003-2014 rapeseed production was annually increasing by 7.9%, as a result of the dynamic growth in cultivation acreage (6.1%), and yielding improvement (1.8%).

Rapeseed production in Poland became the fastest developing plant production branch mainly because of the possible use of rapeseed for biofuel production. The share of rapeseed in the national sowing area has increase from 4% pre-accession to ca. 9% in the last 5 years. In 2014, rapeseed and agrimony cultivation area in Poland reached a record 951 thousand ha and exceeded the area recorded in 2013 by 30 thousand ha. Rapeseed and agrimony harvests were also exceptionally high, amounting to 3276 thousand tons, i.e. 22.3% more, as compared to 2013, such a dynamic growth in yields was a result of a 3.3% increase of sowing area and 18.2% yielding improvement. The average industrial rapeseed purchase price was 1320 PLN/t, and was 10.4% lower than in 2013. However, the decrease in rapeseed prices was still not as severe as in the case of cereals, e.g. wheat, the prices of which dropped by 14.2%.

High production dynamics resulted from an increase in demand and production of vegetable fats. EU policy regarding biofuels and renewable energy gave a positive impulse to rapeseed production and processing in Poland.

A distinctive feature of rapeseed cultivation locations is its regional diversity. Cultivation areas are focused in 9 provinces: Dolnośląskie, Kujawsko-Pomorskie, Lubelskie, Mazowieckie, Opolskie, Pomorskie, Warmińsko-mazurskie, Wielkopolskie and Zachodniopomorskie, which have the most favourable climate conditions or rapeseed cultivations.

The demand for rapeseed grain is shaped by the demand of the oil industry and export. Apart from seeds the export of which in 2014 has reached a record quantity (793.0 thousand tons), and import amounted to 190 thousand tons. Apart from grains, foreign trade focuses on rapeseed oil and rapeseed meal. Poland is the largest European exporter of rapeseed meal.

Tobacco and tobacco product market

Poland holds fourth place in the EU in terms of the size of tobacco production behind Italy, Greece and Spain. In 2014 tobacco cultivation was conducted by ca 9000 farmers on an area of 14.6 thousand ha. Production amounted to 34.9 thousand tons, production efficiency from 1 ha – 2.46 t. More than 90% of planters are part of tobacco producers association.

Domestic tobacco is processed locally in Poland, by a well organized network of primary processing. Polish tobacco, meeting the highest quality standards, is mostly used for American Blend type cigarette production, more than half of which is meant for exports.
Poland is one of the largest cigarette producers and exporters in the European Union. The positive balance of foreign trade in the tobacco sector is steadily growing, with the tobacco industry having a significant share in generating positive balance of foreign trade of the entire food economy (the positive commercial balance of tobacco products in 2014 was 1374.0 million EURO, and was 29.7% higher than in 2013).

Humulus market

Poland is the third, behind Germany and the Czech Republic, humulus producer in the EU. In 2014, ca. 2 thousand tons of raw material were collected, which corresponds to the production of 162.5 tons of alpha-acids. The humulus cultivation area in 2014 amounted to 1.4 thousand ha, of which 58% were bitter varieties, and 42%, aromatic.
Humulus cultivated in Poland is characterized by a very high quality and a unique aroma. The brewing industry highly values Polish aromatic humulus varieties, particularly the Lubelski. In 2014, a new and promising variety of bitter humulus, i.e. the Magnat entered production from the IUNG-PIB in Puławy, with a high alpha-acid content (substances responsible for the bitter aftertaste of beer). Also worth emphasizing is the fact that Poland has one of the most advanced production lines in Europe for alpha-acid extraction from humulus cones.
Before its introduction into the market, humulus is subject to a certification procedure, which confirms its qualitative features and origin.

Dry Fodder market

Dehydrated material is a fodder component containing raw fibers, positively affecting the functioning of the cattle digestive tract. In the financial year 2014/15 in Poland, 4 processing undertakings were in operation, producing a total of 2.38 thousand tons of fodder.
The cultivations of green forage intended for dried fodder production in the financial year 2014/15, amounted to 626.6 ha, 374.3 ha of which were permanent grasslands, and 252.3 ha – legumes cultivations on arable land.

Fruit market

Fruit harvests in 2014 were exceptionally high and amounted to 4.2 million tons. Tree fruit production amounted to 3.6 million t and was 2.8% higher than harvests in 2013 and 44% higher than the average from 2006-2010. Apple harvests amounted to 3.2 million and were 3.6% higher than harvests from 2013, and almost 50% higher than the average from 2006-2010 (tab. 17). Pear harvests amounted to 74 thousand tons, plums – 106 thousand tons, cherries – 176,5 thousand tons, sweet cherries – 48 thousand tons. The total peach, apricot and walnut harvests have been estimated at 20.4 thousand tons. The total shrub fruit and berry harvests amounted to 569 thousand tons in 2014, and were lower ca. 6.3% lower than in the previous year, but 11% higher than the average from 2006-2010. The harvest reduction of blackcurrant was the most severe (by 20%).

Strawberry harvests have been estimated at 203 thousand tons. Currant harvests amounted to 162.6 thousand tons, with blackcurrant – 124 thousand tons. Raspberry harvests amounted to 126 thousand tons, gooseberry – 12.4 thousand tons. Harvests of other fruits from shrubs and berry plantations were estimated as exceeding 65 thousand tons, with blueberry harvests amounting to 12.5 thousand tons.

Production of fruit preparations in Poland in 2014/15 is estimated at the level of 1065 thousand tons, i.e. 5% higher than in the previous season. It was mainly influenced by a record level of 335 thousand tons of apple juice concentrate production. The production of jams, purees, canned products and dried fruit has also increased. Production frozen fruits remained at the level of 415-416 thousand tons. Also lowered is the production of juice concentrates of colour fruit.

Table 17. Fruit production in Poland (in thousand tons)

Specification	Average for a period 2006-2010	2013	2014	2014	
				2006-2010 = 100	2013=100
Total fruit harvests	3027.1	4128.4	4188.9	138.4	101.5
Tree Fruit Harvests	2514.7	3521.6	3620.1	144.0	102.8
including: apples	2136.0	3085.1	3195.3	149.6	103.6
pears	58.5	75.7	73.7	126.0	97.4
plums	93.0	102.4	106.1	114.0	103.6
cherries	168.1	188.2	176.5	105.0	93.8
sweet cherries	38.0	47.6	48.1	126.5	101.1
other [a]	21.0	22.6	20.4	97.1	90.3
Shrub fruit and berry harvests	512.4	606.8	568.8	111.0	93.7
including: strawberries	184.3	192.6	202.5	109.9	105.1
raspberries	73.0	121.0	125.9	172.4	104.0
currants	184.6	198.5	162.6	88.1	81.9
chokeberries	42.2	57.9	43.4	102.7	74.8
gooseberries	15.2	15.0	12.4	81.8	83.1
highbush blueberry	7.6	12.7	12.5	163.0	97.9

[a] *peaches, apricots, walnuts*

Source: Plant production in 2014, GUS, Warsaw 2015; The Fruit and Vegetable Market, Condition and Perspectives, IERiGŻ-PIB; Agricultural and Horticultural Production in 2014, GUS, Warsaw 2015.

In the season 2014/15, as compared with the previous season, purchase prices of almost all fruit were lower. The largest price drop was recorded for cherries and blackcurrants. Prices of dessert apples dropped by 13%, and those intended for processing, by more than 44%. The apple market situation in autumn 2014 was destabilized after the introduction of embargoes by Russia. The only higher purchase prices were recorded for raspberries, pears and sweet cherries.

Vegetable market

Field vegetable harvests in 2014 amounted to 4.64 million tons, i.e. 15.9%, more than in 2013. The greatest harvest increases were recorded for cabbage, onion, and beets, and the smallest for tomatoes. Cabbage production in 2014 amounted to 1.16 million tons, cauliflowers – 246 thousand tons, onions – 651 thousand tons. Carrot production amounted to 823 thousand tons, and red beets – 358 thousand tons. Tomatoe harvests amounted to 272 thousand tons, cucumber – 270 thousand tons. Total "other" vegetable harvests have been estimated as 867 thousand tons, i.e. 23.3% higher than in the previous year. Greenhouse vegetable harvets (mainly tomatoes and cucumbers) decreased by 1.4% to 968 thousand tons, and champignon harvests increased to 275 thousand tons (tab. 18).

Processed vegetable production in the season 2014/15, increased by 2%, to the level of 1.17 million tons. The increase encompassed nearly every product class, with the greatest pertaining frozen vegetables (635 thousand tons).

The total fresh vegetable export in the season 2014/15, amounted to ca. 500 thousand tons, as compared to 541 thousand tons in the previous season. The export of all vegetables normally received by Russia has decresed, i.e. tomatoes, carrots, paprika, cucumbers and mostly, Chinese cabbage. The Russian embargo and high EU production affected the reduction of frozen vegetables export from 423 to 370 thousand tons.

In the season 2014/15, the purchase prices of almost all basic vegetables were lower than in the previous season. The biggest price reduction was recorded for cabbage (by 43%) and onions (by 41.7%). Carrot prices, due to high demand in Europe, have increased by 12.5%. The large decrease in purchase prices of almost all vegetables reflected the growth in supply on the domestic market, caused by larger harvests and limiting export of most species. Average prices of greenhouse tomatoes were 6.9% lower than in the previous year, and cucumbers by 13.8%.

Table 18. Vegetable Production in Poland (in thousand tons)

Specification	Average for a period 2006-2010	2013	2014	2014	
				2006-2010 = 100	2013=100
Total Vegetable Harvests	5302.0	4986.0	5607.2	105.8	112.5
Field Vegetable Harvests	4564.7	4003.9	4639.0	101.6	115.9
including: cabbage	1195.4	975.4	1156.4	96.7	118.6
cauliflowers	220.1	210.1	245.6	111.6	116.9
onion	649.3	551.1	651.1	100.3	118.1
carrots	853.3	742.5	822.6	96.4	110.8
beets	335.7	298.2	357.8	106.6	120.0
cucumbers	269.2	253.6	266.9	99.1	105.3
tomatoes	254.4	270.4	271.9	106.9	100.6
other[a]	787.2	702.7	866.7	110.1	123.3
Greenhouse Vegetable Harvets[b]	737.3	982.1	968.2	131.3	98.6
including: tomatoes	411.0	559.4	538.7	131.1	96.3
cucumbers	209.7	259.2	265.1	126.4	102.3
other[c]	109.9	163.5	164.3	149.5	100.5
champignons	214.0	270.0	275.0	128.5	101.9

[a] parsley, leek, celery, radish, lettuce, rhubarb, asparagus, dill, and other, [b] data of IERiGŻ-PIB, [c] paprika, lettuce, aubergine, radish, and other greenhouse vegetables

Source: Plant production in 2014, GUS, Warsaw 2015; The Fruit and Vegetable Market, Condition and Perspectives, IERiGŻ-PIB, No. 40-46.

Fruit and vegetable market organization level in Poland

The main condition for supporting the horticultural sector by both EU and national funds is manufacturer organizing. The purpose of the producer organization's operations is supply concentration and the sale of members' produce, its tailoring to market needs, both in terms of quantity and quality, as well as production costs reduction, price stabilization, and promotion of cultivation and sewage treatment methods and technologies friendly for the natural environment. Until 2013 it was possible to create groups of producers in the fruit and vegetable sector, temporary entities intended to meet the criteria of recognition as a producer organization, via realizing, in the period of at most 5 years, activities and investments set forth in the pending recognition plan, approved by an administrative decision. Producer groups were mainly created in areas specializing in horticultural production, i.e. Mazowieckie (apples, fungi, vegetables), Kujawsko-pomorskie (tomatoes), Wielkopolskie (vegetables, fungi), and Lubelskie (soft fruit, apples). The value of produce introduced by groups and organizations currently amounts to ca. 20% of the domestic horticultural production. The average organization level in the EU horticultural market is ca. 35%.

Currently 114 groups and 187 organizations of fruit and vegetables producers operate in Poland, with ca. 7.3 thousand members.

ANIMAL PRODUCTION, SELECTED MARKETS

Poland is a significant meat producer in the European Union. In 2014, it occupied the fourth place with regard to pork production, the first in terms of poultry production, and seventh in beef production.

Total production of basic meat varieties in 2014, amounted to 4090 thousand tons, and was 12.4% greater, as compared with production recorded in 2013. (3640 thousand tons). Within the production structure in 2014, poultry meat is dominant (45.6%), with pork at second place (44.1%), and beef at third (10.2%), and within the consumption structure, pork is in first place (54%), and poultry at second (37%). Very little beef is consumed (2.3%). The turnover of foreign trade in meat and meat products allow for adjusting the supply structure to the domestic demand structure.

Poland records clear positive balance of international meat trade, in 2014 it amounted to 869.7 thousand tons, i.e. 52.7 thousand tons more than in 2013. o. 6.5%. Such results mean that international markets consumed 21.3% of Polish meat production in 2014.

Table 19. Meat and precessed meat production and foreign trade (pork, beef and poultry) in 2014 [a] (thousand tons)

Specification	Production [a]	Export [b]	Import [b]	Foreign Trade Balance
Pork	1 802	619.7	817.0	-197.3
Beef	419	339.8	33.5	306.3
Poultry	1 869	867.6	106.9	760.7
Total	4 090	1 827.1	957.4	869.7

[a] in hot carcass weight, [b] in meat equivalent

Source: Agriculture in 2014, GUS, Warsaw 2015; Meat Market. Condition and Perspectives, No. 48, IERiGŻ-PIB.

According to preliminary data of the GUS, total meat consumption in 2014, reached a level of 73.9 kg/inhabitant, i.e. increased by 6.4 kg, i.e. 9.5%, as compared to 2013. The greatest share was still pork (39.9 kg/inhabitant, i.e. 54%), then poultry (27.4 kg/inhabitant, i.e. 37.1%), with the smallest being beef consumption (1.7 kg/inhabitant, i.e. 2.3%). In relation to 2013, the consumption all meat varieties has increased: pork by 4.4 kg, i.e. 12.4%, beef by 0.2 kg, i.e. by 13.3% and poultry by 0.9 kg, i.e. by 3.4%.

Poland records a clear positive balance of international trade in meat and meat products. In 2014 it amounted to nearly 870 thousand tons, and in relation to 2013, increased by 103.3 thousand tons, i.e. by 12.1%.

Pork market

In 2014, for the first time in years a growth of swine livestock was recorded. In November 2014, swine livestock reached 11.3 million heads, showing an increase by 271.1 thousand heads (+2.5%) as compared to the same period in 2013.The number of piglets weighing between 20 kg and 50 kg, swine for slaughter and sows have also in-

creased. The herd of sows for rearing remained practically the same, as compared with the end of 2013, amounting to 956.3 thousand heads, including pregnant sows – 643 thousand heads, i.e.1.4% more than in 2013, According to GUS preliminary data, in 2014, pork production amounted to 1802 thousand tons, and was higher than the year before by 196 thousand tons, (+12%).

The average purchase price of swine in Poland in 2014 was 4.82 PLN/kg in live weight, and was 10.6% lower, as compared to in 2013 (5.39 PLN/kg). Drop in prices was particularly visible in the second half of 2014, It was associated with the outbreak of the African swine fever and consequences embargoes on the importation of selected food products from the EU introduced by Russia, as well as a growth in pork supply in the EU. The highest prices on the Polish market were recorded in summer (5.19-5.33 PLN/kg), from July 2014 onwards a drop in prices was recorded, which in December reached 4.16 PLN/kg.

Since Poland's accession to the EU, purchase prices of swine have become more and more dependent on EU prices and the exchange rate PLN/EURO. In 2014, Poland imported 615 thousand tons of pork, mainly from the EU-15 (1.2% less than in 2013) and 5.4 million heads of swine (mainly pigs and piglets), i.e. 6% more than in 2013. meat export has amounted to 367.1 thousand tons, (19.4% less than 2013), and livestock 90.0 thousand heads (9% more than in 2013).

Beef market

For several years Poland has observed a change in cattle herd structure, resulting from the decreasing number of cows compensated by a growth in numbers of other cattle. Also, the number of suckler cows has increased, although its share in total cattle livestock remains minute.

In December 2014, cattle livestock reached 5660 thousand heads, showing a minute annual increase of 1.1%. The increase in the total cattle herd numbers resulted from increase in the number of calves (+2.4%) and young cattle aged 1-2 years (+ 5.5%).
Cow stock has decreased, as compared with December 2013 by 38 thousand heads (-1.6%) to 2403 thousand heads. In 2014, Poland recorded a visible growth in beef production. Beef production in 2014 amounted to 419 thousand tons, and was 12% higher than in 2013 (373 thousand tons). The demand for beef is mainly fueled by foreign countries. In 2014, 81.1% of national beef production has been consumed in the foreign market.
In 2014, purchase prices for cattle were lower than record values noted in 2012 and 2013. The average price in 2014, according to GUS, reached 5.96 PLN/kg of live weight, and was 3.9% lower than in 2013, (6.20 PLN/kg).

Poultry market

The production structure of poultry for slaughter is dominated by chicken and turkey broiler meat (93.2%). In 2014, the growing trend of meat production continued, albeit with higher dynamics (12.5% increase). Poultry meat production is growing faster than domestic consumption. The main factor stimulating production growth, was still export, the production share of which increased to 46.4%. Production growth in 2014 was also positively influenced by the growth of domestic demand for poultry.
According to MARD, the average purchase price for chickens in 2014 amounted to 3.67 PLN/kg and was 5.2% lower than the year before. The average purchase price for turkeys has decreased by 1.2% per year, to the level of 5.81 PLN/kg. Purchase price for broiler chickens was fluctuating throughout 2014. In the first quarter of 2014, a growth was recorded, and in April and May a decrease occurred. As of the end of May, purchase price for chickens was gradually growing, peaking in August at 3.96 PLN/kg. The highest purchase price for chickens was, however, lower by 5.0% from of the lowest price recorded in the previous year, and amounting to 4.17 PLN/kg. The lowest purchase price for chickens – 3.46 PLN/kg, was recorded in the last two months of 2014.

Egg market

Egg production in 2014 amounted to ca. 10.3 billion pcs., and was 2.1% higher than in 2013. On average, 1 laying hen produced 228 eggs, which was 9.1% more than in 2013. Estimates show that egg consumption per 1 inhabitant was 148 pcs.
In 2014, prices for table eggs in packing plants decreased, and increased in processing plants.
The average sale price for eggs in packing plants in 2014 was lower than in 2013 by over 3%, and amounted to 31.20 PLN/100 pcs. In January 2014 egg price reached a level of 29.90 PLN/100 pcs., i.e. 24% lower than in the same period in 2013. From January until May, prices were recorded as lower than in 2013, and started to gradually grow since June. In December 2014, the egg sales price has increased by ca. 8%, as compared to December 2013.
The average prices for eggs in 2014, as compared to 2013, in the weight category XL, L and M dropped accordingly by 8, 8.4 and 3%, and in the weight category S, increased by about 3%.
In 2014, the egg sales structure according to classes was as follows: category XL was 2.7%, cat. L – 44.0%, cat. M – 48.7%, and cat. S – 4.6%. No significant changes occurred within the sales structure as compared to 2013.
The average purchase price for eggs in 2014, was 4% higher than in 2013, and amounted to 3453 PLN/ton.
In January, the purchase price for eggs amounted to 3104 PLN/ton, and was the lowest in 2014. During the subsequent two months, i.e. February and March egg prices grew. In April egg prices decreased by ca. 7%. From May until December 2014, the purchase price for eggs was steadily increasing.
Alongside consumption stabilization, export share in the Polish table egg production is steadily growing. In 2014, 207.4 thousand tons of shelled eggs were exported (6.7% less than in 2013) and 19.5 thousand tons of egg products. Import amounted to 23.4 thousand tons of shelled eggs and 5.2 thousand tons of egg products. Foreign Trade Balance was 189.6 million, i.e. 5% lower than in 2013.The main markets for Polish eggs were: Germany and the

Netherlands, as well as Italy, the Czech Republic, Hungary, and Romania. Main egg import sources were the Netherlands and Germany.

Honey market

In 2014, over 57 thousand beekeepers operated in Poland, and the number of the bee colonies, according to the data of the Research Institute of Horticulture Apicultural Division in Puławy (IO) – is increasing.

Honey production in 2004-2014 was fluctuating heavily – from 9 thousand tons in 2004, to 23 thousand tons in 2011. In 2014 in Poland, 14 thousand tons of honey were collected (tab. 20). The year was unfavourable for beekeepers. Losses of bee colonies amounted to 11.4%, and adverse weather conditions affected the efficiency of bee colonies. A single bee colony produced on average 11.9 kg honey, i.e. 4.6 kg less than in 2013. The highest honey efficiency of a single bee colony was achieved in Kujawsko-pomorskie (18 kg), and the lowest in Małopolskie (4.7 kg).

The honey trade is dominated by direct sales (81% of production), 14.6% of produce is directed to collection points, 4.3% via retail, and 0.1% satisfies industrial needs.

Poland, like other EU countries, is for many years now recording higher imports of honey than exports. In 2014, Poland imported honey from many countries, the most from the Ukraine 6.8 thousand tons, China 5.7 thousand tons, Bulgaria 0.8 thousand tons, and export was directed primarily to France (2.7 thousand tons), Germany (2.2 thousand tons) and Denmark (1.2 thousand tons).

Table 20. Honey production and foreign trade turnover in Poland in 2004-2014 (in thousand tons)

Specification	Year									
	2004	2006	2007	2008	2009	2010	2011	2012	2013	2014
Natural honey production	9.0	22.0	18.0	18.0	14.5	12.4	23.0	17.2	22.1	14.0
Export	0.8	0.4	0.527	0.7	1.5	2.7	4.7	6.4	11.2	15.3
Import	3.6	5.7	3.414	5.6	7.4	11.6	13.7	14.2	20.0	22.7

Source: own work on the basis of data from the Central Statistical Office (GUS), the Research Institute of Horticulture Apicultural Division in Puławy, and the Foreign Trade IT Centre of the Ministry of Finance (Centrum Informatyki Handlu Zagranicznego Ministerstwo Finansów).

Currently, the fourth National Programme Supporting Apiculture in Poland is realized for the years 2013/14; 2014/15; 2015/16. Financial means intended for realizing tasks set forth by the Programme amount to 16.6 million EURO (50% – EU funds, 50% – domestic budget). As compared to the apiculture program implemented in 2010/11-2012/13 (15.1 million EURO), the Programme budget was increased by 10%. In the opinion of beekeepers, apiarian programs are the main means of supporting the sector, and have for years enjoyed considerable interest of its beneficiaries.

Milk market

Milk production in Poland is one of the most important branches of agricultural production. According to GUS, in 2014, commercial milk production amounted to 14 387 million PLN, and constituted 18.6% of total commercial agricultural production. Milk production in 2014 has increased by 2.1% and reached a level of 12.607 billion litres, in spite of the prevailing downward trend in the numbers of milk cows. The yearly livestock reduction of 2.2% to 2248 thousand heads of milk cows, as of December 2014, was compensated by the 3.7% increase in milk cow efficiency to the level of 5164 l/head. The average efficiency of milk cows covered by the utility value assessment in 2014 (32.9% of the milk cow population) reached the value of 7366 l/head, and was higher as compared to 2013, by 1.9%.

In 2014, milk purchase has reached a record high level of 10.3 billion litres (ca. 10.6 million t) and was higher than in 2013, by 7.2%. The growth of raw material supply contributed to an increase in dairy production. Production of skimmed powder milk has increased, to 170 thousand tons (57% increase), as well as full powder milk to 47.5 thousand tons (4.2% increase), butter 156.7 thousand tons (5.2% increase), sour cream and cream to 373.8 thousand tons (5.8% increase). On the other hand a decrease was recorded in the production of yoghurts to 434.2 thousand tons (4.0% decrease), all cheeses to 722.2 thousand tons (1.8% decrease), drinking milk to 1603.7 thousand tons (0.6% decrease), whey to 1275.1 thousand tons (11.5% decrease).

Growth in milk purchases in 2014 has contributed to Poland exceeding the national deliveries quota in the last quota year 2014/15. Based on annual information, provided by purchasers to ARR (Agency for Agricultural Market) Area Branch Directors, the quantity of milk purchased in the quota year 2014/15 amounted to 10.505 billion kg. Therefore, the national delivery quota was exceeded by 580.3 million kg, i.e. 5.85%, and the number of wholesale suppliers, who have exceeded their allocated individual quotas reached nearly 63.5 thousand. After applying the re-allocation coefficient, amount of additional fee for exceeding the individual delivery quota for 2014/15 amounts to 90.89 PLN per 100 kg of milk introduced into the market, exceeding the imposed limits. In view of the above, the fee imposed on Poland due overproduction is more than 161.6 million EURO, which is ca. 659.8 million PLN.

The liquidation of the administrative restrictions in sales volume, i.e. milk quotas, means that producers may increase production and direct it into the market without penalties for exceeding quotas. Decisions on increasing or reducing production shall be taken based on market situation and economic calculation of production profitability.

A characteristic feature of the milk and dairy product market in 2014, was the breakdown of the good market situation prevalent in 2013, both nationally and globally. The average price of milk purchase amounted to 137.11 PLN/100 l, i.e. 1.1% more than in 2013, but the beginning of 2014 has seen a drop in prices of milk and basic dairy products. The price of milk purchase has decreased from 153.65 PLN/100 l in January, to 123.48 PLN/100 l in December, i.e. by 19.6%. Alongside the drop in milk prices, prices of many dairy products also dropped by: skimmed powdered milk – 36.2%, full powdered milk – 26.6%, Gouda curing cheese – 25%, butter in blocks – 19.6%, sour cream – 5.4%, cottage cheese – 2.3%. Recession was also present on global markets. Prices in 2014 have decreased for: skimmed powdered milk – 44.4% (from 3356 EURO/t in January, to 1865 EURO/t in December), butter – 27.4% (from 4016 EURO/t in January, to 2917 EURO/t in December), Cheddar cheese – 21.5% (from 3609 EURO/t in January, to 2831 EURO/t in December).

In 2015 sales prices of basic dairy products continued to drop. In the first week of September 2015, prices for basic dairy products were as follows: SPM 7.10 PLN/kg, FPM 9.12 PLN/kg, butter in blocks – 11.74 PLN/kg, Edam cheese 10.44 PLN/kg, Gouda cheese 10.47 PLN/kg, which means drops as compared to the same period in 2014 accordingly by: 27, 26, 10 and 21% for cheeses.

Despite the unfavorable of economic situation on the world markets, dairy product surplus was directed there. Foreign trade turnover reached record levels. In the raw material equivalent, export has increased by 25.2%, and import by 22.1%. According to value, export growth amounted to 10.9%, and import – 12%. As a result of such changes, the positive balance of foreign trade has increased by 10%, reaching 1.1 billion EURO.

RENEWABLE ENERGY SOURCES AND AGRICULTURE

One of the main challenges facing the modern world, strongly emphasized in EU policy, is environmental protection and counteracting climate change. Progress in the use of renewable energy sources (OZE) and a gradual limiting of the consumption of fossil fuels are the condition for reducing carbon dioxide emissions, thus inhibiting changes in the atmosphere composition, and as a result stopping climate change. For EU and Polish economies, the development of the renewable energy industry also means achieving partial independence from fuel imports.

In Poland, a significant barrier for the development of rural areas are frequent power shortages, or insufficient quality of the power supply. Local and individual energy production with the use of local resources (e.g. biomass, solar radiation, wind, water, etc.) increases the local power security and affects the economic development.

Apart from its basic function of food production, agriculture may also provide resources needed to produce electricity, heat and fuel. Such resources do not have to be agricultural products, but also by-products or waste. Their use for energy or fuel production has a doubly beneficial – it limits the problem of by-product and waste management and the resulting environmental burden, and reduces the use of non-renewable resources.

Viewed from the perspective of connectivity between agriculture and renewable energy, special attention should be paid to processing raw materials of agricultural origin (in particular by-products) in biogas plants and biofuel production.

Agricultural biogas

An effective way to utilize agricultural biomass, is to subject it to the process of methane fermentation in agricultural biogas plants. The obtained gas may be, after processing, used directly for households purposes, or power production. As substrates, agricultural biogas plants may use: agricultural raw materials, agricultural by-products, liquid or solid animal faeces, by-products, waste, or residues from agricultural product processing, or forest biomass, and plant biomass collected from areas other than recorded as agricultural lands or forests.

Considering the agricultural production structure, Poland is estimated to be able to produce ca. 7.8 billion m^3 of biogas annually, without limiting the supply of foodstuffs and fodder.

The most commonly used raw material for biogas production are animal faeces. Polish agricultural holdings are estimated to annually create ca. 35-38 million m^3 of liquid manure, at least 20% of which may be used for biogas production. An equally valuable substrate is also manure. Permanent grasslands may be a significant source of raw materials for biogas production. They are estimated to be able to provide additional (apart from yields currently used for fodder) 2.3 million tons of biomass for use in power production.

Agricultural biogas plants are a stable source of electric power, because unlike devices using solar energy, or wind, their functioning does not depend on weather conditions. It is also worth mentioning that organic matter residues, the so-called *post-ferment*, can be used for fertilizing.

According to valid regulations, construction of agricultural biogas plants with output not exceeding 500 kW is not included in the group of undertakings with potential significant environmental impact, i.e. do not require creating an environmental impact report. Regulations concerning the construction of biogas plants are set forth in the Regulation of the Minister of Agriculture and Food Economy of 7 October 1997 *on technical requirements for agricultural buildings and their location.*

Production of agricultural biogas, or power generation with the use thereof constitutes non-agricultural business operations, and as such does not require a concession. It does require however, to be entered in the regulated activities register kept by the Agricultural Market Agency (ARR). The exception is agricultural biogas

production, or power generation with the use thereof by farmers in micro installations, which in the light of binding laws and regulations does not constitute a business activity.
So far (since 2005) power generation with the use of biogas was supported under the system of Certificates of Origin. The producer of biogas electric power received a "security notice", evidencing the use of renewable energy sources (OZE), which they could later sell on the market to power companies obliged to demonstrate a specific share of "green" energy in the overall power output sold to end users.
The Act of 20 February 2015 *on renewable energy sources* introduces new solutions with regard to supporting of renewable energy production. With regard to electric energy producers in micro installations, the so-called "prosumers", a possibility has been introduced of obtaining fixed prices, or use periodical energy balancing (the so-called *netmetering*). Producers conducting business operations will be able to use an auction system, under which sales prices of electric power shall be agreed upon by way of a tender procedure. A common principle for all forms of support, is a 15 year period wherein support may be granted. This period is counted from the date of initial generation of electric energy.
Within programs realized with the use of European Funds i.e. Regional Operational Programmes and the Operational Programme for Infrastructure and Environment, actions have been included, aiming to support the production and distribution of energy from renewable sources, promotion of efficient energy use, and restriction of greenhouse gas and dust emissions. Investment assistance (subsidizing construction, purchase and equipment assembly costs) may be granted to public (e.g. districts) and private (e.g. entrepreneurs) beneficiaries on various OZE installations, including agricultural biogas plants. Within the Rural Development Programme for 2014-2020, agricultural biogas plants may potentially constitute an element of investments concerning the modernization of agricultural holdings or agricultural and food processing plants. In addition, investment support for OZE installations is also granted by the National Fund for Environmental Protection and Water Management under the PROSUMENT program. It should be emphasized that subsidies from the aforementioned programs cannot be combined with support mechanisms stipulated in the Act of 20 February 2015 *on renewable energy sources*.
In mid 2015 the register of the Agricultural Market Agency President contained 58 agricultural biogas plants (with total power output of 67.17 MW), whose total annual efficiency is nearly 269 million m^3 of agricultural biogas. Which is later used to generate power and heat. In total in 2014, 354.92 GWh of electric energy were produced from agricultural biogas, of which 281.63 GWh has been introduced for the power grid, and the rest has been used for production needs (38.95 GWh), or own needs of the producers (34.34 GWh). At the same time, as a result of agricultural biogas combustion in co-generative units in 2014, 373.7 GWh of heat were produced, which was used, mainly for technological processes.

Biofuels

An opportunity for limiting fossil fuel consumption and reducing greenhouse gas emissions, is the use of biomass fuels.
If the replacement of fossil fuels with biocomponents is to perform its role with regard to reducing greenhouse gas emissions, raw materials used for biofuel production must be produced in a sustainable manner. Pursuant to the Act of 25 August 2006 *on biocomponents and liquid biofuels*, this means that the raw material production (e.g. agriculture, use of fertilisers and plant protection products, harvesting, preparation for storage and warehousing), must result in emissions reduced by at least 35% than emissions from the use of fossil fuels. Since 1 January 2017, the reduction must amount to at least 50%. On the basis of research carried out for Polish cultivations used as raw materials for biofuel production (wheat, corn, rapeseed), it has been found that they currently meet the conditions for balanced production, which means that they can be used without limitation in the production of biofuels.

In connection with Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 *on the promotion of the use of energy from renewable sources in Poland,* the National Indicator Target (Narodowy Cel Wskaźnikowy – NCW) has been defined, which assumes that by 2020 at least 10% of energy consumed in transport will come from renewable sources. This requires the use of biocomponents (biofuels), as an admixture to transport fuels.

Currently valid regulations concerning NCW impose an obligation on fuel manufacturers, to use biocomponents in liquid fuels and liquid biofuels in the quantity of 7.10% by the 2016, 7.8% in 2017, and 8.50% in 2018. The fuel producer may use a smaller (by 15%), biocomponent admixture for fuels, if, in a given financial year, at least 70% of used biocomponents were produced from agricultural raw materials: contracted from farmers operating within the EU, or manufactured by producers, or from obtained biomass. The quantitative demand on biocomponents results from the NCW index for a given year, and the fuel quantity used in transport. Annually 240-246 thousand tons of bioethanol are used for gasoline production in the country. The share of domestic production bioethanol in total quantity used in fuels in 2014, amounted to 58%. Raw materials for bioethanol production of are mainly cereals (70-85%), as well as molasses (10-20%), and also potatoes, fruit and other resources. In 2014 bioethanol was produced in 12 plants. As a supplement, for diesel oil, or its substitute, ca. 850 thousand tons of esters are used. Domestic production constitutes more than 80% total quantity of esters introduced into the market. Esters are manufactured using mainly rapeseed oil, from which ca. 94% of this biocomponent is produced. In 2014, esters were produced in 11 plants. Production capacities – both bioethanol ester producers – surpass domestic demand for these biocomponents.

In the future we should expect limiting the use of biofuels produced food or fodder materials, and shifting to the so-called 2nd generation biofuels, manufactured from cellulose etc. Since 2016, the use of these biofuels shall be counted as double, when determining the degree of NCW implementation by the producer. So far in Poland, 2nd generation biofuels, are not produced.

THE TRY FINE FOOD PROGRAMME

The Try Fine Food Programme (TFF), is a programme for promoting food quality. It aims to create a positive image of high-quality agri-food products of among both domestic and foreign consumers. The Try Fine Food logo placed on the packaging should help the consumer in selecting of products from among many similar ones available store shelves. The consumer shall receive information that the selected product was manufactured from verified raw materials, and that it contains few additives and is correctly labeled. The TFF label is also an opportunity to promote products and companies, both in Poland and abroad, by strengthening the companies' prestige and product reputation.

Try Fine Food Programme Procedure

Any and all food producers and processors amy apply for awarding them with the **Try Fine Food** (TFF) label, regardless of their size or type of ownership. One of requirements for participation in the Programme, is to conduct business operations within the European Union. A manufacturer interested in distinguishing their product with the TFF logo, may, at any time, apply to the Minister of Agriculture and Rural Development to begin proceedings leading to the granting of said logo. Any number of products can be presented to be distinguished. The TFF logo is granted only to products meeting the TFF Programme criteria, and which received a positive recommendation from the Scientific Committee for Quality Food Products of the Try Fine Food Programme, appointed by the Minister of Agriculture and Rural Development. The Committee consists of specialists in the field of food processing, nutrition, medicine, plants and animal rearing, law, and economics.

The TFF logo of the Try Fine Food Programme is granted to the following groups of products:

1) meat and meat products;
2) milk and dairy products;
3) fish, seafood and their products;
4) eggs and egg products;
5) honeys;
6) cooking fats;
7) cereal legumines root plant products;
8) fruit, vegetables, fungi and their products;
9) confectioneries and pastries;
10) herbs and spices;
11) food products of special dietary purpose;
12) mixed products and those processed on the basis of the aforementioned;
13) water and non-alcoholic beverages;
14) alcoholic beverages;
15) other.

The Minister of Agriculture and Rural Development awards the TFF logo for a period of 3 years, in order to maintain the high quality of the marked agri-food products.

The Try Fine Food Programme is also about informational and promotional activities. They popularize the TFF label among consumers, manufacturers and processors, as well as merchandisers and distributors. They are used

for providing reliable and credible information about agri-food products and popularising knowledge about the benefits resulting from the participation in the TFF Programme. Promotional activities of the Programme also aim to inform consumers about the conditions of obtaining raw materials, production technologies and food quality and safety monitoring systems, as well as the standards of proper product labeling. The prmotional activities of the TFF Programme include various forms of promotion used to increase label recognizeability and popularization of marked products include: numerous trade-exhibition events, both national and foreign, open air events and information-educational campaigns in the mass media.

The application forms used for registering agri-food products with the TFF Programme, as well as a list of appendices needed for evaluation, are available on the website of the Ministry of Agriculture and Rural Development in the Try Fine Food tab, and detailed information is available at:

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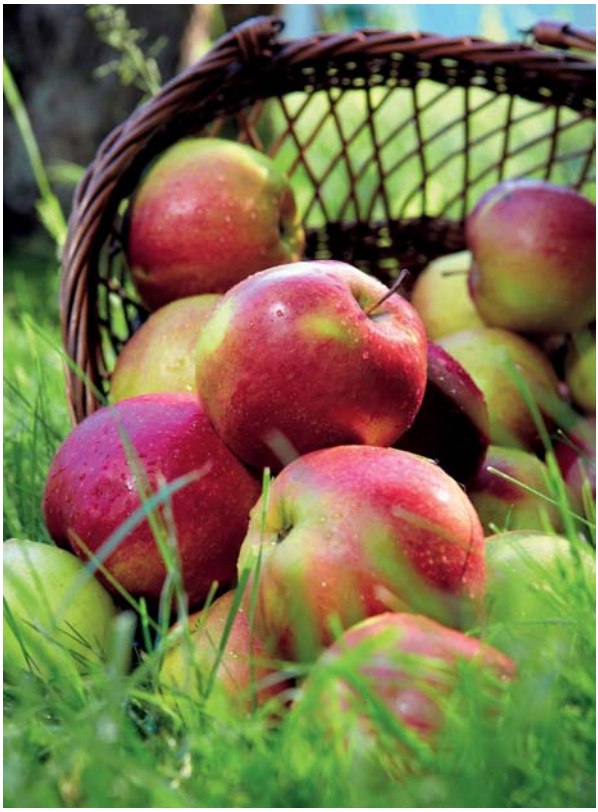


POLISH REGIONAL AND TRADITIONAL PRODUCTS

Many farmers feared competition, from more developed countries when Poland was admitted into the European Union in 2004. However, it quickly turned out that what was initially a source of concern and complexes, became an advantage. The fragmentation and low degree of chemicalization in Polish agriculture predisposes it for production high-quality, organic and natural food – highly sought after in western Europe.
Due to particular knowledge and skills handed down from father to son, producers learn organic farming from an early age. Material obtained as a result, is then processed in traditional, unique ways, thereby becoming a product of premium quality, as well as the pride and staple of the region of its origin.

List of Traditional Products

In order to identify such products, the Minister of Agriculture and Rural Development keeps a List of Traditional Products. It was first created in 2004, and remains the main source of knowledge about Polish traditional products. It is comprised of products, whose quality or exceptional characteristics and properties result from applying traditional production methods, constitute a region's cultural heritage, and remain an element of identity of the local community. The importance of the List and its popularity are proved by the fact that until 31 July 2015 it contained 1454 products.

Protected Products in the European Union

Food quality politics implemented by the European Union became a great opportunity which is so far successfully used by all Polish farmers. This is proven by i.a. gradually increasing number of products submitted for registration with geographical designation and as traditional specialties. The traditional and regional food segment in Poland is dynamically growing, and an increasing number of producers wants to produce high quality food. It is with them in mind that the Rural Development Programme for 2007-2013 and 2014-2020 provides special supportive measures.

This interest also stems from the fact that high quality food production, protection and promotion play an important role in the EU. The main objectives of EU food quality policy are: promotion of diverse agricultural production, product name protection from abuse and imitation, and helping consumers in understanding the specific nature of registered products, Introduce our traditional flavours and high quality to the European culinary heritage.
So far, in the registered in the EU system of Protected Designations of Origin, Protected Geographical Indications and of Traditional Specialties Guaranteed was 37 names of Polish products, of which 9 were registered as Protected Designation of Origin, 19 as Protected Geographical Indications, and 9 under the Traditional Specialty Guaranteed label. Two applications have been waiting for registration by the European Commission as PDO and PGI.

Regional and Traditional Products

Protected Designation Origin (PDO) – product quality or its characteristic features should be mainly or solely related with its particular geographical setting and relevant natural and human factors, such as climate, soil quality, or local *know-how*. Due to requirements concerning production, processing, and preparation, the product applying for PDO must have a very strong connection with a given region. The entire production process should be conducted at the designated geographical area, including the acquisition of raw materials. Polish products registered by the European Commission as PDO: bryndza podhalańska, oscypek, redykołka, wiśnia nadwiślanka, podkarpacki miód spadziowy, karp zatorski, fasola Piękny Jaś z Doliny Dunajca/fasola z Doliny Dunajca, fasola wrzawska, miód z Sejneńszczyzny/Łoździejszczyzny. Rapeseed oil from Wielkopolska is currently applying for registration as PDO.

Protected Geographical Indication (PGI) means a product name, whose quality, reputation, or other characteristic qualities are a result of a given geographical origin. At least one of the production stages of given product should take place within an area to which its refers. Polish products registered by the European Commission as PGI: miód wrzosowy z Borów Dolnośląskich, rogal świętomarciński, wielkopolski ser smażony, andruty kaliskie, truskawka kaszubska lub kaszëbskô malëna, fasola korczyńska, miód kurpiowski, kiełbasa lisiecka, suska sechlońska, obwarzanek krakowski, jabłka łąckie, śliwka szydłowska, chleb prądnicki, miód drahimski, jabłka grójeckie, kołocz śląski/kołacz śląski, ser koryciński swojski, jagnięcina podhalańska, cebularz lubelski. Krupniok śląski apply for registration as PGI.

Traditional Specialty Guaranteed (TSG) means a traditional agricultural product, or a food article obtained with the use of traditional production, or processing methods, or composition, or produced from traditionally used materials, or components. A traditional product shall be deemed as used for at least 30 years. Polish products registered by the European Commission as TSG: staropolskie miody pitne (półtorak, dwójniak, trójniak i czwórniak), olej rydzowy, pierekaczewnik, kiełbasa jałowcowa, kiełbasa myśliwska, kabanosy.

Benefits from using PDO, PGI and TSG

Registration of a product name as geographical indication, origin names, or traditional speciality guaranteed assures that nobody throughout the whole European Union unlawfully uses a registered name in trade. The right to use graphical label and registered name belongs solely to producers, who originate in a registered territory, produce goods in accordance with the specification in a given geographical area. Thus granting the label protects producers against unauthorised use of the product name in trade, and allows to emphasize product uniqueness,

and supplies consumers with reliable knowledge on product origin and their characteristics, as well as traditional methods of production applied by the Producer.

Control and Certification

A very important element of the PDO, PGI and TSG system is providing high-quality product, which is confirmed by way of inspection. Production, processing and preparation processes control of products registered as PDO, PGI and GTS carried out on request of manufacturers, by provincial quality inspectors for agricultural and food products, or authorized certifying units. Producers elect the inspecting body and bear the costs of control. The control scope and frequency depend on the specific nature of the production process of a particular product. A current list of authorized certifying units is available on the website: www.minrol.gov.pl.

Producers, who manufacture their products in accordance with the registered specification, receive a certificate of compliance and a quality certificate. This is, at the same time, a confirmation for consumers that they receive a product of high, guaranteed quality.

According to the report of the Chief Inspectorate of Commercial Quality of Agri-Food Products, in 2014, 431 quality certificates and certificates confirming compliance of production processes with specifications were valid, while according to the state as of 31.12.2014, 400 producers were authorized to introduce PDO, PGI and TSG products into the market.

The "Three Signs of Flavour" Campaign

In February 2013, on the initiative of the Ministry of Agriculture and Rural Development and the Agricultural Market Agency a three-year campaign began entitled "Three Signs of Flavour", co-financed from the funds of the European Union.

The primary goal of the campaign directed, among others, to farmers, processors, producer associations, distributors, chefs, restaurant owners, cooking school students, as well as consumers, is the promotion of Polish food products registered as Protected Designation of Origin, Protected Geographical Indications, and Traditional Specialties Guaranteed. As part of the campaign, press conferences, fairs, trainings, advertisements in the mass media and promotional campaigns in selling points, restaurants and agrotourism farms were organized.

ORGANIC AGRICULTURE

The organic agriculture sector in Poland in recent years was characterized by constant dynamic development. Statistical data indicate that at in recent years an increase was recorded in the number of organic farms and the number of processing plants, increase in usable area, as well as an increase in market availability of organic products.

In 2014, the number of organic holdings in the country was 11 times higher than in 2003, and amounted to 24 829 thousand. According to the data available under EUROSTAT, in 2012 Poland held 3rd place in the European Union in terms of the number of organic holdings. In addition, in 2014 the area used in accordance with the regulations on Organic Farming increased 11 fold, as compared to 2003, and amounted to 656 thousand ha. Such a large number of organic holdings may be considered as a strength, as those producers posses the knowledge of organic farming principles and binding regulations in this sector. The structure of cultivations indicates a considerable potential for development of organic animal production due to a considerable proportion of meadows and pastures in the agricultural area.

In 2014, the number of ecological processing plants in the country was 18 fold higher than in 2003, ammounting to 484 The structure analysis of organic processing plants shows that they make use of both domestic and foreign resources. This may be a result of Poland's advantageous geographical location in close vicinity of countries with the highest demand and expenses on organic products. The largest number of organic processing plants operating in Poland in 2014, were involved in fruit and vegetable processing, closely followed by cereal, coffee, tea, meat, and milk processing. Production of other agri-food products, e.g. cocoa, chocolate, or confectioneries was conducted by 24.8% processing plants.

One of the strengths of organic farming in Poland are historical conditions and holding structure. For many years, agricultural production in Poland was and still is conducted with a minute use of chemicals, i.e. plant protection products and synthetic fertilizers. As a result, agricultural producers, much more than in other developed countries, posses knowledge and skills regarding crop protection with the use of agronomic methods. With regard to the structure of organic holdings, it should be noted that a high number of small holdings in Poland is favourable for biodiversity protection. Such holdings are predisposed for conducting production by organic production methods. This is especially important, because of a large diversity of natural and climatic conditions in Poland, affecting the preservation of biodiversity in rural areas and increasing their tourist appeal. In addition, an undoubtable strength of the organic farming sector is the constantly growing environmental awareness of farmers, an increase of producers' knowledge on principles of using traditional crop rotation and other natural methods of maintaining or increasing soil bioactivity. Farmers involved in the production of organic food are mostly highly educated persons, who are perfectly capable to work in very hard agricultural conditions, and are open to innovations and cooperation.

Increasing the ecological awareness of farmers and innovative organic products, are supported since 2004, through subsidies for conducting basic research in the field of organic farming and promoting the results thereof via popular science publications. Assessing research from the perspective of the past few years, it may be concluded that a group of scientists was formed, who have significant achievements in the field of organic farming research.

An advantage of organic farming in Poland are also the well established farming consultancy units with great potential, scientific institutes and academic centres with access to knowledge and new solutions, and the high level of knowledge and skills of organic farming inspectors.

Regardless of the above, it should be emphasized that the growing consumer knowledge on the impact of agriculture and the, broadly understood, food production and distribution on the environment, as well as the characteristics and advantages of organic food, affects the growing demand for products from this sector. Also,

an additional promotion of organic farming and an incentive for producers for further development is the annual *Best Organic Farm Contest*. Of great interest among manufacturers is also the Center of Practical Training and "demonstration farms", where best solutions are implemented concerning organic farming. Such activities, encouraging the dissemination of knowledge about organic farming, also translate into a growing demand for organic farming products.

It is worth pointing out that the effect of such actions is the improvement in cooperation between producers and environmental organizations, enabling the exchange of practical knowledge along the science –practice axis, sector consolidation, and undertaking joint ventures.

In addition, taking into account the high importance attributed to the development of organic farming and organic food market, in Poland, a *General Plan of Action for Organic Food and Agriculture in Poland for 2014-2020* was prepared, describing specific actions, aiming at the development of this sector of agriculture.

FOREIGN TRADE

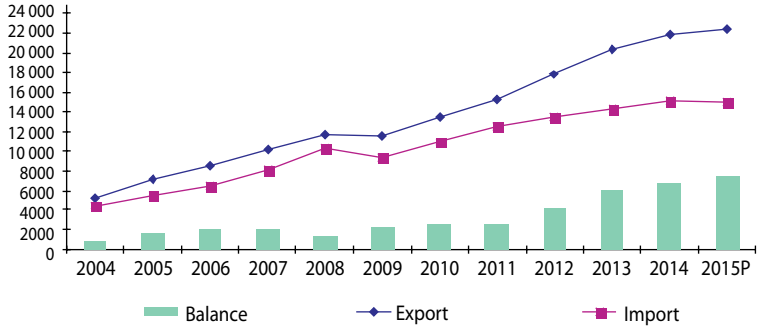
General evaluation

Foreign trade in agri-food products has for years been an important part of Polish foreign trade. It remains under a significant influence of the economic and political situation both in Europe and in the world. In 2014, the main factors influencing Polish trade in agri-food products were i.a.: a rapid decrease in crude oil prices and currency exchange rate fluctuations (USD appreciation compared to most other currencies, including the Euro), the growing geopolitical uncertainty related to the conflict in the Ukraine, and limitations in food trade caused by the Russian embargo, as well as detection in Poland of African Swine Fever (ASF).

In such adverse conditions facing Polish agri-food product exporters in 2014, their turnover rate has actually increased, as compared to the previous years. The value of agri-food product exports has increased by 7.1%, to 21.9 billion Euro, with import expenses increasing to 15.1 billion Euro, i.e. by 5.7%. In connection with the greater growth of export than import value, the balance of commercial turnover has increased by 10.3%, to the record level of 6.7 billion Euro.

Agri-food product exports income in 2015, is estimated to reach a value of ca. 22.5 billion Euro, and will be almost 3% greater than in 2014. Import expenditures are estimated to remain on a similar level as in the previous year, and should amount to ca. 15.0 billion Euro. As a result, the surplus in foreign agri-food product trade may reach a value of ca. 7.5 billion Euro (Fig. 18).

Figure 18. Polish foreign trade in agri-food products in 2004-2015 (in million EUR)



IERiGŻ-PIB forecast

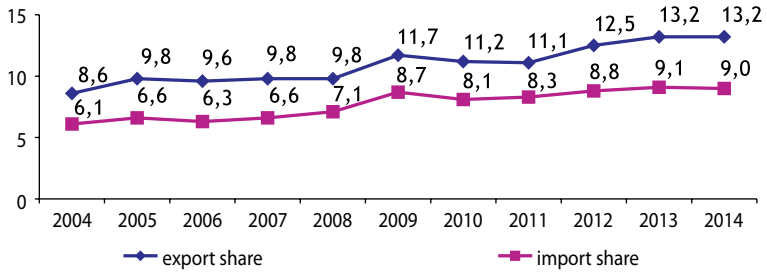
Source: Own work on the basis of: Foreign trade in agri-food products. Condition and perspectives, No. 21-41, Market Analysis 2005-2015, IERiGŻ-PIB, ARR, MARD, Warsaw.

In 2014, particularly in the first half, trade was largely affected by the favourable market post-harvest situation in 2013. Most markets in the country recorded surplus increases. On the other hand our main customer – the European Union – recorded a less favourable demand-supply ratio, which in connection with the growing economic stabilization, resulted in the growth in demand for imports. In the second half of the year the effects of the Russian embargo on the import of agri-food products from selected countries, including Poland started to be noticeable. In addition, lower turnover dynamics was a result of a decrease in sales prices on the global market, and consequently a drop in sales prices.

In 2014, the significance of the agri-food sector in the trade balance still remained very high. The share of agri-food product in Polish export amounted to 13.2%, and was at a similar level as in 2013, and the share of import

amounted to 9% (in 2013 it was 9.1%) (Fig. 19). These changes were a result of a slightly greater turnover dynamics in trade in total than in agri-food product trade specifically.

Figure 19. The share of agri-food products in Polish foreign trade total (in %)



Source: Own work on the basis of: Foreign trade in agri-food products. Condition and Perspectives, No. 21-41, Market Analysis 2005-2015, IERiGŻ-PIB, ARR, MARD, Warsaw.

The surplus in agri-food product trade has a very significant impact on the trade balance total. Its value (in absolute figures) in 2014 has three times exceeded the total trade deficit value. In addition, agri-food product trade turnover contributes to the stabilization of the domestic agricultural markets. The production dynamics of the agri-food industry exceeds demand dynamics for food and agricultural products. The greater part of production growth in the sector is directed to foreign markets. Hence, export is a very important channel for utilizing surpluses, and constitutes an important source of income for the domestic food industry. Which in turn has a positive impact on the situation in many branches the agriculture and food industries. In 2014, more than one third of the food industry production was directed to export, as compared to 13.7% prior Poland's accession into the EU.

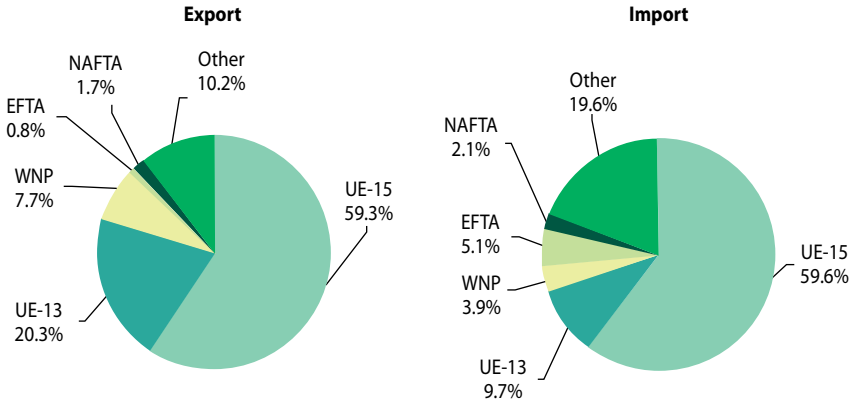
In 2014, the agri-food product import-export turnover ratio has increased once again to 145, as compared to 143% in 2013, and was still significantly higher than in trade in general (98%), where in the analyzed period its value dropped slightly. This means that the export value agri-food products was higher by as much as 45% than the import value thereof.

Geographical structure of agri-food products foreign trade products

Poland's commercial link network with foreign countries are asymmetric. The dominant trade partners in agri-food products are EU member states, whose share in the Polish agri-food export in 2014 has increased by 1.2% to 79.6%, as compared to 78.4% in 2013. The share of EU-15 countries has increased by 0.4% to 58.9%, and EU-13 countries by 0.3% to 20.2% (Fig. 20). Import is also dominated by EU countries. Their share in Polish agri-food imports in 2014 amounted to 69.3% and was 0.2% lower than the year before (69.5%). The share of EU-15 countries was 59.3% (59.2% in 2013), and EU-13 countries – 9.8% (10.3% in 2013).

A different trend was visible in agri-food trade with other developed and developing countries and in exports the Commonwealth of Independent States (CIS) member states. In connection with the Russian embargo (August 2014) the importation of agri-food products from i.a. the EU, including Poland, the export value to CIS states was reduced by 22.9 to 1.7 billion Euro. Sales to CIS states in 2014 consituted 7.7% of the total agri-food export value, and was lower than in the previous year by 3.0%. Restrictions in exports to Russia, forced target market diversification. Polish agri-food product exporters began searching for alternative markets, mainly in developing countries of Africa, Asia, the Middle East, and North America.

Figure 20. Geographical structure of Polish agri-food foreign trade in 2014



EFTA – Iceland, Liechtenstein, Norway, Switzerland;
NAFTA – Canada, Mexico, USA.
Own work on the basis of: Foreign trade in agri-food products. Condition and Perspectives, No. 21-41, Market Analysis 2005-2015, IERiGŻ-PIB, ARR, MARD, Warsaw 2015

For many years, Poland's most important trade partner in agri-food products are member states of the European Union. In 2014, agri-food export value to the EU-28 amounted to 17.4 billion Euro, and was 8.7% higher than in 2013. Export value to the EU-15 has increased by 8.5% to 13.0 billion Euro, and to the EU-13, by 9% to 4.4 billion Euro. Import from the EU-28 increased in 2014 by 5.4% to 10.9 billion Euro, including EU-15 – 6.4%, to 9.0 billion Euro, with a simultaneous decrease from EU-13, by 0.2% to 1.5 billion Euro.

The share of EU-28 in the Polish agri-food importation in this period has slightly decreased, from 69.6% to 69.3%. The import value from developing countries and emerging economies increased from 2.7 billion Euro in 2013, to nearly 3.0 billion Euro in 2014, i.e. by 11%. The share of this group of countries in the Polish agri-food importation has increased to 19.6% (by 0.6%). W 2014 the agri-food product trade balance with EU-28 countries has again increased, amounting to 6.9 billion Euro, as compared to 6.1 billion Euro in 2013. Also, said balance with EU-15 countries has increased by 0.5 billion Euro, to almost 4.0 billion Euro, and with EU-13 countries, by 0.4 billion Euro, to 3.0 billion Euro. The trade balance improvement was a result of a faster growth of agri-food product exports than imports.

The second group receiving Polish agri-food products were members of the Community of Independent States (CIS). In 2014, export to that particular group has decreased by 22.9%, to 1.7 billion Euro, as compared to 2.2 billion Euro in 2013. Such a situation was mainly a result of import cessation Polish pork by the CIS (in connection with identifying ASF cases in Poland in 2014) and the Russian embargo (since August 2014) on the importation of many agri-food products important for Polish exports (including i.a.: meat and meat products, dairy, and fruit and vegetable products). The value of exports to Russia has decreased in 2014 by 30% to 880 million Euro. Therefore, Russia has lost its third place in the agri-food export size in 2013, and is now placed seventh. It was still however, one of the major recipients of Polish food, comparable with the Netherlands and Italy. Its share has decreased by 2.2% to 4.0% of Polish agri-food exports. Exports to the Ukraine and Belarus has also recorded a decrease of accordingly 21.8 and 7.0%, to 357 and 273 million Euro. The share of these countries in the Polish agri-food export has decreased accordingly by 0.6 and 0.2% , to 1.6 and 1.4%. Said countries have again become marginal markets for Polish food. In 2014, expenses on the purchase of agri-food products in the CIS increased to 0.6 billion Euro, i.e. by 15.6%. Therefore, the foreign trade balance of these products was reduced to 1.1 billion Euro, as compared to 1.7 billion Euro in 2013.

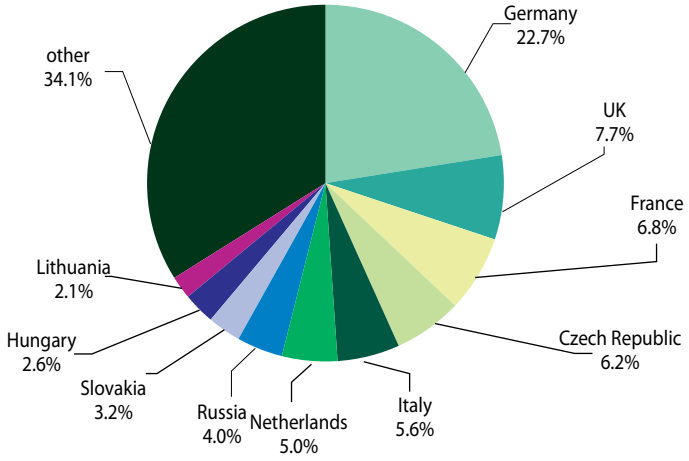
In 2014, the sale of agri-food products to developing countries and emerging economies (Asia, Africa, the Middle East) has also been dynamically increasing. Export value amounted to 2.2 billion Euro, and was 31.3% higher than in 2013. These markets are very absorptive and prospective for Polish agri-food exporters.

Other important recipients of Polish agri-food products were NAFTA (Canada, Mexico and the USA) and EFTA (Iceland, Liechtenstein, Norway, Switzerland) states. Export revenues from these products to the aforementioned groups in 2014, have increased slightly. NAFTA countries received 0.4 billion Euro worth of agri-food products, which was an increase as compared to the previous year by 7.5%, and EFTA, 0.2 billion Euro (increase by 3.6%). EFTA countries, particularly Norway (fish) are also important food suppliers to Poland. The share of this group in Polish agri-food imports in 2014 amounted to 5%.

Main recipients of Polish agri-food products

Traditionally, the most important recipient of Polish agri-food products has for many years been Germany. In 2014, Germany's share in the Polish agri-food export amounted to 22.7%, as compared to 23.1% in 2013 (Fig. 21). Food export revenues to Germany in 2014, amounted to 4.9 billion Euro, and were higher than the year before by 5.2%. The largest amounts of products sold to Germany (value-wise) included: fish and fish products, including mainly smoked fish (14.4% of export value), meat and giblets mainly poultry (7.1%), bread, pastry and biscuits (4.3%), rapeseed seeds (4.2%), tobacco products (4.2%), fruit juices, mainly apple (4.0%), milk and sour cream (3.4%), as well as wheat, chocolate and chocolate products, and frozen fruits (mainly strawberries and raspberries) – ca. 3% each.

Figure 21. Main recipients of agri-food products from Poland in 2014



Source: Own work on the basis of: Foreign trade in agri-food products. Condition and Perspectives, No. 21-41, Market Analysis 2005-2015, IERiGŻ-PIB, ARR, MARD, Warsaw 2015.

The second important market for Polish agri-food products, with an almost 8% share in the country's total export, was Great Britain, who in 2014, bought 1.7 billion Euro worth of produce. Export revenues from this country increased, as compared to the previous year, by 9.5%. The British imported mainly: meat products and sausages (17.0% of export value), chocolate products (14.1%), meat and poultry giblets (11.1%), bread, pastry and biscuits (4.9%), fish products (3.0%), fruit juices, mainly apple (2.9%), and fresh vegetables (2.9%).

In 2014, the third biggest recipient of Polish agri-food products was France, which increased its import to 1.5 billion Euro, i.e. 25.2% more. The share of this country in Polish agri-food export in 2014 amounted to 6.8%, as compared to 5.8% in 2013. The French purchased mainly: tobacco products and cigarettes (34.3% of export value), fish and

fish products (7.3%), meat and poultry giblets (7.2%), alcohol (5.3%), food products (5.1%), as well as bread, pastry and biscuits (3.6%).

The fourth place among important recipients of Polish food in 2014, was the Czech Republic, with a 6.1% share, which bought nearly 1.4 billion Euro worth of agri-food products. This means an increase as compared to the previous year by 9.8% (1.2 billion Euro in 2013). The Czech Republic bought mainly: rapeseed oil (10.6%), meat and poultry giblets (8.6%), coffee (7.4%), cheese and cottage cheese (6.2%), bakery products (including i.a. biscuits and wafers) (5.8%), pork (5.6%), chocolate products (3.6%), as well as mineral and carbonated water (3.5%).

Subsequent places among vital recipients of Polish agri-food products in 2014, were won by: Italy – 1.22 billion Euro (14.6% increase), the Netherlands – 1.09 billion Euro, the Russian Federation – 880 million Euro (30% decrease), Slovakia – 700 million Euro, Hungary – 576 million Euro and Lithuania – 464 million Euro.

Italy purchased mainly: beef, tobacco products and cigarettes, pork, cheese and cottage cheese, and dried fish; the Netherlands bought: cigarettes, poultry, beef, fruit juices, and eggs. Slovakia bought mainly: pork, poultry and edible giblets, rapeseed oil, cheese and cottage cheese, tobacco products and cigarettes, and sugar syrups. Hungary purchased mainly: tobacco products and cigarettes, pork, bakery products, poultry, and chocolate products. Russia, until introducing the embargo (until August 2014) bought: apples, cheese and cottage cheese, bakery products, chocolate products, frozen vegetables, fruit juices and purees.

The greatest increase in the export value in 2014, as compared to the previous year, was recorded in trade with Morocco. Sales to this country increased more than five times, reaching the level of ca. 89 million Euro (in 2013 it was only 16 million EURO), mainly as a result of a significant export of wheat. The sale of a large batch of wheat has also contributed a significant increase in Polish exports to among others: Saudi Arabia, Egypt, South Africa, Zimbabwe and the Sudan. As a result, the total value of agri-food products sold to Saudi Arabia amounted to 265 million Euro, Egypt – 62 million Euro, South Africa – 41 million Euro, Zimbabwe – 13 million Euro, and the Sudan – 9 million Euro. Increased, as compared to the previous year, powdered milk sales had a considerable effect on the increase in export value of Polish agri-food products to Algeria, Cuba and Nigeria. Sales to these markets were accordingly: 210, 23 and 22 million Euro. Also, the increase in pork sales to Hong Kong influenced a twofold growth in exports to this country, to the level of 146 million Euro (69 million Euro in 2013). Larger interest in Polish poultry in Benin, influenced the growth in exports to this country by 47%, to 40 million Euro. These are distant markets, but very absorptive and perspective for Polish food producers.

Main agri-food product suppliers to Poland

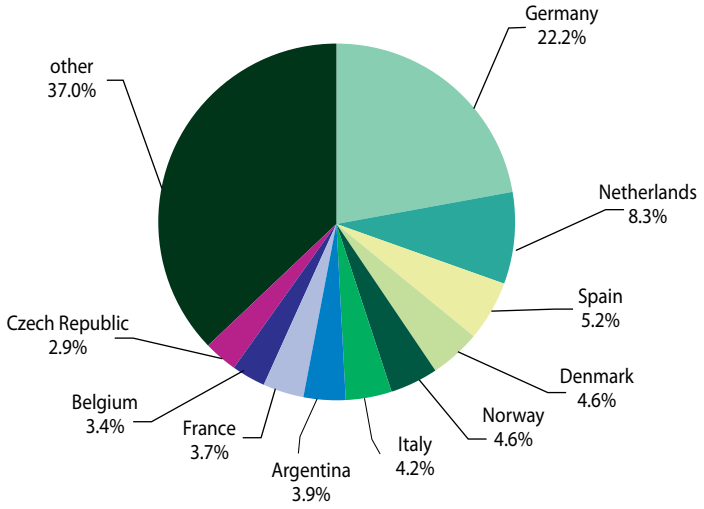
The most important agri-food product supplier to Poland have for years been the EU states, mainly EU-15 (59.6% share in total agri-food product import to Poland and 86% in deliveries from the EU). The remaining quantities of agri-food products are delivered new EU-13 member states (9.7%), CIS (3.9%), EFTA (5.1%), NAFTA (2.1%), and other (19.6%) (Fig. 22).

Agri-food products imported to Poland originated mainly in Germany (who at the same time is the main recipient of Polish exports in the sector), and their value in 2014 has increased to 3.4 billion Euro, i.e. 4.1%, thereby consituting 22.2% of total Polish agri-food import. The largest purchases in terms of value from Germany were: pork (11.3%), chocolate and chocolate products, (6.9%), animal fodder (5.2%), bakery products, biscuits and waffles (4.6%), pork livestock (4.0%), cheese (3.6%), coffee and sugar syrups (ca. 3.0% each).

As in the previous years, in 2014 the second largest supplier of agri-food products to Poland were the Netherlands, from which 1.2 billion Euro worth of goods were imported (7.1% increase as compared to 2013). Within the commodity structure of deliveries, the greatest share was traditionally had by flowers (13.5%), then by pork (9.6%) and palm oil (4.8%) and cocoa butter (3.6%), and also sowing seeds and sugar syrups (ca. 3.0% each).

The third most important agri-food product supplier to Poland was Spain, purchases from which have increased by 2.0%, to 785 million Euro. Spain is a traditional supplier of horticultural products: fresh fruit, mainly citrus (33.3%), and also fresh vegetables (18.6%), as well as pork (12.4%) and fruit-vegetable products.

Figure 22. Main agri-food product suppliers to Poland in 2014



Source: Own work on the basis of: Foreign trade in agri-food products. Condition and Perspectives, No. 41, Market Analysis, IERIGŻ-PIB, ARR, MARD, Warsaw 2015.

The fourth place belongs to Denmark with recorded import increased by 4.1%, to 699 million Euro. Deliveries from Denmark were dominated by swine (31%) and pork (31%), as well as fish and fish products (8.0%), and cheese (3.0%).

Fifth place among food suppliers to Poland was held by Norway, which had increased the value of products sent to our country by 10.9%, to 698 million Euro. From Norway we imported mainly fish (99% of import value).

Next place is held by Argentina, where goods were purchased worth 595 million Euro, i.e. 17.6% more than in the previous year. Ca. 85% of import value from this country was had by soy meal and oil seeds. Subsequent places belong to: Italy (640 million EURO), France (557 million EURO), Belgium (513 million EURO) and the Czech Republic (439 million EURO).

Commodity structure of foreign trade in agri-food products

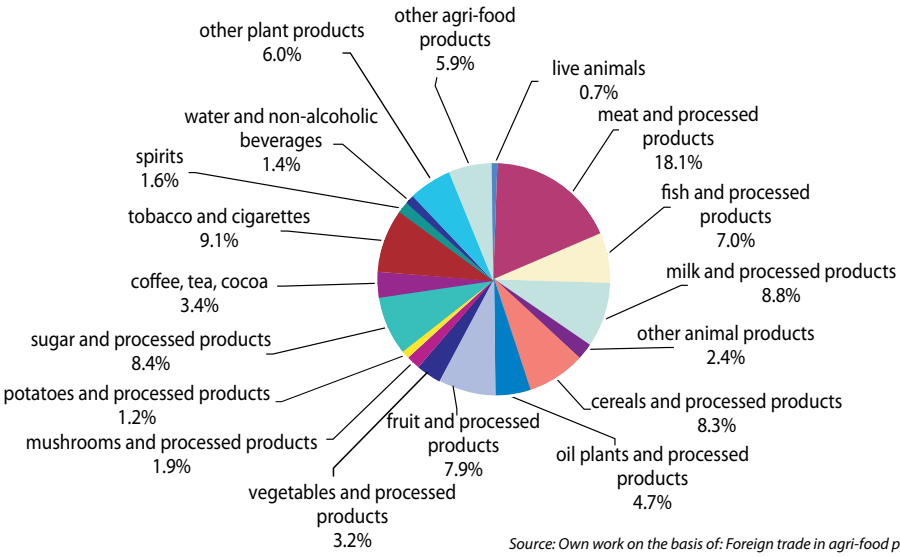
The commodity structure of Polish foreign trade in agri-food products (value-wise) was dominated by food industry products. Therefore the surplus value in agri-food product trade is dependent on the result of trade in these products. In 2014, export revenue in these products constituted 82.5% of the total agri-food export value, as compared to 81.7% in 2013. The share of processed products in the agri-food import was also relatively large, amounting to 67.3%, as compared to 67.1% in 2013. The food industry export value in 2014 has increased by 5.2%, amounting to 17.6 billion Euro. Their import was increased to a lesser extent (by 3.7%), reaching a value of 9.9 billion Euro. Surplus in turnover in these goods has increased by 0.6 billion Euro, amounting to 7.7 billion Euro. Agricultural product export in 2014 remained at the level of 3.7 billion, and their import increased by 2.7%, up to 4.8 billion Euro. Shortage of commercial exchange in agri-food products has increased slightly to 1.1 billion Euro, as compared to 1.0 billion Euro in 2013.

In 2014, similarly to the previous year, foreign trade results increase in food products was significantly higher than in agricultural products. However, for three years, the trade deficit for this group of products remains at the level of 1 billion Euro. Poland imports agricultural products produced domestically (e.g. fish, citrus and tropical fruit, coffee, tea, cocoa, spices), including raw materials for further processing, are afterwards often re-exported, and

high protein materials for fodder production. Therefore, foreign trade in agri-food products generates a deficit. Its size is more dependent on domestic agricultural materials exports, than on the size of import, which is relatively constant.

The commodity structure of Polish agri-food exports in 2014 has not recorded significant changes. The prevailing category were products of plant origin, which, like the year before, constituted 57.1% of the total export value of agri-food products. The biggest share in this group was had by: fruit, vegetables and fruit-vegetable products (11.1%) – 1.7% decrease, tobacco products (9.1%) – 1.6% increase, sugar and products (8.4%) – 0.7% decrease, cereals and cereal products (8.3%) – 1.1% increase. Animal-origin products constituted 37.0% of Polish agri-food export (37.4% in 2013). The main item within the export structure of animal products is meat and meat products (18.1%) – 0.6% decrease. Dairy products were also of high importance, with a share increase of 0.5% , to 8.8%, as well as fish and fish products (7.0%) (Fig. 23).

Figure 23. Export commodity structure of Polish agri-food products in 2014, (value-wise)



Source: Own work on the basis of: Foreign trade in agri-food products. Condition and Perspectives, No. 41, Market Analysis, IERIGŻ-PIB, ARR, MARD, Warsaw 2015.

After the 2013 harvest, a considerable improvement could be seen in the demand-supply ratio in domestic plant product markets. As a result, the export in the first half of 2014 of plant products was relatively large, limited in its dynamics (value-wise) by a significant drop in sales prices. In addition, the growth dynamics of import demand in the EU was still minute. Animal product markets were characterised by fluctuations: exports of dairy product and poultry went up, while pork exports dropped. In the second half of 2014, despite the relatively good market situation in the country, a reduction was recorded in turnover dynamics in plant product exports, and the export of animal products, as compared with the previous year, has slightly decreased. It was an effected of export restrictions to Russia. The PLN/EURO and PLN/USD exchange rate did not have a greater impact on trade volume, since its changes throughout the year were not significant.

In 2014, export dynamics of animal products has decreased significantly. Its value amounted to 8.0 billion Euro, and was 3.9% higher than in 2013. Also, the export of most animal product groups has increased, with mostly dairy (by 10.3%), meat products (by 8.3%), and fish and fish products (by 3.7%). Live animals export decreased (by

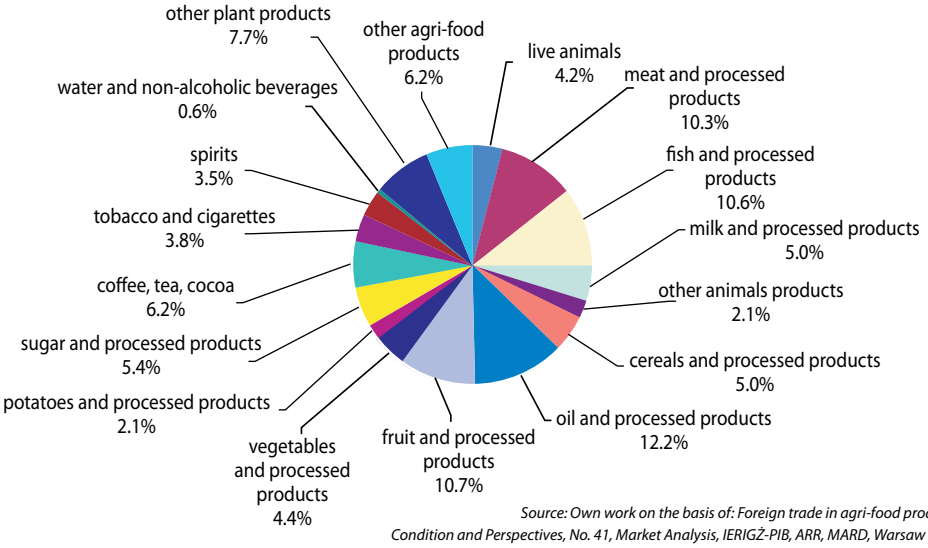
11.7%), including mainly cattle (by 21.6%) and swine (by 12.0%). Red meat and meat offal export was minimally lower (by 0.4%). The decrease occurred in the second half of 2014.

Growth dynamics in plant product and cattle exports have also been significantly lower than in the previous year. Their export value amounted to 12.3 billion Euro, and was 4.5% higher than in 2013. In the first half of 2014, the growth rate was visibly higher than the second half, which was caused by a drop in transaction prices. The highest increase was recorded in the export value of: tobacco products and cigarettes (by 27%), water and soft drinks (by 23.8%), cereals (by 21.9%), cereal products: (by 23.1%), as well as coffee, tea, cocoa and spices (by 36.9%), which more than offset the export limitations of: fresh fruit (by 18.0%), oilseeds (by 10.9%), fruit products (by 8.1%), sugar (by 29.7%), vegetable products (by 4.9%) and other plant products of less export importance.

The slowdown was mainly a result of restrictions on exports to Russia in the second half of 2014. At the same time export to the remaining markets, including EU, under relatively low dynamics was supported by an increase in price competitiveness.

In 2014 the commodity structure of agri-food product import was also dominated by products of plant origin, mainly products from other climate zones. The share of plant products was 61.5% of the total value of Polish agri-food import. Within those products the most important were fruit vegetables and fruit-vegetable products (15.1%) and oil plants and their products (12.2%). An important role in import was also played by: coffee and tea (6.2%), sugar and products (5.4%), and cereals and their products (5.0%). Animal product imports were dominated by: fish and products (10.6%), as well as meat and products (10.3%). The share of livestock in the commodity structure of animal product import was at the level from the previous year, i.e. 4.2% (mainly swine). Dairy products had a small share in food imports – 5% (Fig. 24).

Figure 24. Commodity structure of agri-food products import from Poland in 2014 (according to value)



Source: Own work on the basis of: Foreign trade in agri-food products. Condition and Perspectives, No. 41, Market Analysis, IERIGŻ-PIB, ARR, MARD, Warsaw 2015.

In 2014 the import dynamics of plant products increased slightly, and the import dynamics of animal product has significantly decreased. The import value of the latter amounted to 4.7 billion Euro, and was 3.7% higher than the year before. Plant product import increased by 2.6% to 9.1 billion Euro. The share of plant products has decreased by 0.4% , to 61.8%, and animal product import increased by 0.2% , to 32.2%. The reduction in the importation growth rate was the effect of developments in the second half of 2014, when a turnover decrease of a few percent

was recorded, due to high supply and low prices on the domestic market of products normally exported to Russia. Also, the import value of all groups of animal products has increased, mostly dairy (by 13%), meat products (by 8.7%), and of fish and fish products (by 5.0%). From among plant products a decrease in imports was recorded only by potatoes and potato products (by 4.3%), and water and non-alcoholic beverages (by 2.7%). In the structure of other plant products, the greatest growth was noted in the import value of tobacco and cigarettes (19.9%), vegetables and vegetable products (4.1%), as well as coffee, tea and cocoa (2.9%).

Foreign trade in selected agri-food products

Cereals and their products

In 2014, for the third time in a row, results have improved of Polish foreign trade in cereals and cereal products, which reached a previously unrecorded level , which was the result of both a favorable domestic market situation and a large demand in target markets.

In 2014, similarly to the previous year, a significant increase in cereals and cereal products export was recorded, particularly in the second half of the year. Its value, in spite of a drop in transaction prices, grew to nearly 2.0 billion Euro, i.e. by over 20%. This was mainly a result of the post-harvest increase in grain exports, amounting to nearly 5.5 million tons, i.e. 33% more than in 2013, including: 3.2 million tons of wheat (1.7 million tons in 2013), 0.8 million tons of rye (0.9 million t), 0.8 million tons of corn (0.9 million t), 154 thousand tons of barley (293 thousand tons), and small quantities other of cereals.

Exports dynamics of products from primary processing was smaller (increase by 13% to 485 thousand tons). Its value in 2014 amounted to 139 million Euro, and was 11% greater than in the previous year. Exports of most products from this group has increased, mostly of malt (by 118%). The only products, whose exports decreased were groats and flakes (by 9%).

The export volume of processed products amounted to 338 thousand tons, and was 17% higher than the year before. The value of export of those products amounted to 627 million Euro, and was 23% higher than in 2013. The export of bread has increased(by 25%, to 217 thousand tons), as well as products of swelling and roasting grains (by 7%, to 94 thousand tons). On the other hand, the export of noodles has again decreased (by 2%, to 27 thousand tons).

The export commodity structure (value-wise) in 2014 remained largely the same. Cereals were still dominant (57%), with secondary processing products in 2nd place (35%) and primary processing products in 3rd (8%).

2014 saw certain shifts in the geographical structure of foreign trade in cereals and cereal products. Once again, both in export and import, the role of the EU has decreased. EU markets received 64% of those products quantity-wise, as compared with 79% in 2013. Value-wise, the share decrease of the EU was slightly less (from 81 to 71%). This was mostly due to the decrese of improrttance of the EU-15 (by 9%, to 58%), as well as new EU member states (by nearly 2%, to 13%). Their place was mainly taken by developing countries, whose share increased by 8%, to 22%, and other developed countries (increase by 1%, to 2.4%) and CIS (increase by 1%, to 3.6%).

In 2014, EU dominance as the target market for grains has again clearly decreased. It received 61% of the total grain exports. Compared with the previous year, the EU share has decreased by 16% . The share of developing countries has increased (by 14%, to 38%), as well as other developed countries. More than 32% of exported wheat was received by EU countries (mainly EU-15: Germany – 849 thousand tons, Spain – 183 thousand tons, the UK – 55 thousand tons), as compared to 51% in 2013. The remainder – 64% (48% in 2013), was exported to developing countries: Saudi Arabia – 882 thousand tons, Morocco – 408 thousand tons, Algeria – 242 thousand tons, South Africa – 92 thousand tons, Egypt – 87 thousand tons, Kenya – 71 thousand tons, Zimbabwe – 50 thousand tons. Rye and corn were exported mainly to the EU (Germany, Denmark, the Czech Republic), which constituted accordingly 90 and 98% of their total exports. Relatively large quantities of rye (8%), were also sold to other developed countries (i.a. the USA). The share of the EU in barley exports amounted to 63%, and the remainder (37%), was sold to developing countries (i.a. Algeria, Libya). Other cereals were almost exclusively exported to the EU.

The export of primary processing products ids dominated by the EU. Their share in 2014 has decreased by 3%, to 94%, for the benefit of developing countries, mainly North African and Middle Eastern. The EU is also the main sales market of processed goods. In 2014 its share has slightly decreased (by 1%) to 84%. The share of CIS states has increased (by 2%) to 11%.

In 2014 as slight increase was recorded in the imports of cereals and cereal products, 1.8 million tons, as compared to 1.7 million tons in 2013. This was mainly due to greater importation of cereals (by 13%, to 1.4 million t). The importation of rye has also increased. Still however, the quantity was quite small. Import was dominated by: wheat (561 thousand t, as compared to 582 thousand t in 2013), corn (356 thousand t to 287 thousand t), and barley (255 to 160 thousand tons). Imports of primary processing cereal products was smaller by 8%, to 324 thousand tons. A significant decrease was noted in the import value of flour (by 13%, to 59 thousand tons), as well as groats and flakes (by 8%, to 58 thousand tons). Imports of other products from this group has decreased to a much smaller degree, including malt by 6%, to 115 thousand tons, and bran by 5% to 95 thousand tons. The value of import of primary processing cereal products was reduced by 15% to 112 million Euro. The imports of processed products has decreased by 6%, to 173 thousand tons. The importation of pasta doughs and bread has decreased (accordingly by 9 and 6%), while the products of swelling and roasting of grains increased by 7%. Expenditures on imports of processed products in 2014 have increased by 4%, to 278 million Euro.

The import commodity structure (value-wise), recorded a slight increase in the share of grains (47%, to 46% in 2013) and processed products (37% to 36%), while the share of primary processing products decreased to 16% (from 18% in 2013). Expenditures on imports of those products amounted to 742 million Euro, and were almost 1% higher than the year before.

The geographic imports structure of cereals and cereal products was dominated by EU countries (quantity-wise their share amounted to 82%, and value-wise – 88%). The decrease in the share of EU-15 countries has been almost entirely replaced by a growth in importance of new member states. The share of CIS countries has also increased. Cereals were mostly bought from the EU (76%, as compared to 79% in 2013). The second largest supplier of grains to the Polish market were CIS countries. In 2014, their share in cereal imports has decreased from 13%, to 12%. Again, the share of developing countries has increased (by 3% to 12%). Products of primary and secondary processing almost entirely came from the EU.

Poultry

In 2014 Polish foreign poultry trade (livestock, meat, offal, products), was still on the rise, and its dynamics was higher than the year before. Exports increased by 19%, and amounted to 797 thousand t of produce, with a similar percentage growth in sale revenues, which increased to 1.6 billion Euro. Import has increased by ca. 11%, reaching 134 thousand tons, with a growth in purchase expenditures by 17% (to 220 million EURO). The positive turnover balance has improved further in – quantity-wise to 663 thousand tons (by 22%), and value-wise to 1.4 billion Euro (by 19%).

In 2014, within the commodity structure of poultry export, no significant changes have occurred. Poultry meat and offal were dominant (ca. 89% in the export volume). Poultry products and livestock had a smaller share, amounting to accordingly ca. 8 and 3%. The main market for poultry products were still EU member states with an 82% share in export volume. High growth dynamics of poultry exports was a result of, i.a. its high competitiveness on EU markets, with regard to price and quality.

In 2014, poultry meat export (along with offal) increased to 709 thousand tons in produce weight, i.e. by ca. 21%. Export revenues increased to 1.4 billion Euro – 21.5%. Poultry meat and offal exports to EU-28 countries has increased by 18%, to 567 thousand tons, which constituted 80% of total export volume. EU-15 received 348 thousand tons of poultry meat, 51 thousand tons more than in the previous year, worth 897 million Euro, and EU-13 – 221 thousand tons, an increase by ca. 38 thousand tons, with an export growth value of 326 million Euro. The largest recipient of Polish poultry meat (value-wise) in 2014, (as in the previous year) was Germany – 342 million Euro (which comprised 25.2% total poultry meat export). Second place was held by the UK (13.4%) and, subsequent ones, the Czech Republic (8.3%), France (7.8%) and the Netherlands (7.4%).

From among other states, the largest recipient of Polish poultry meat in 2014, was again Benin, which increased its purchases in Poland by nearly half (to 31 thousand tons), with a growth in export value by 44% to 38 million Euro. Another important poultry meat recipient in 2014, was Hong Kong, with delivery size increased by 35% to 29 thousand tons, with a 25% export value growth to 33 million Euro. Also larger were Polish poultry shipments to i.a.: Congo (quantity-wise by 21%, and value-wise by 15%), China (accordingly by 17 and 4%), Togo (by 71 and 49%), Liberia (by 67 and 76%), Gabon (by 42 and 27.5%), as well as the Ukraine (by 75 and 35%).

Poultry product export in 2014, amounted to 65 thousand tons, and was ca. 11% higher than in the previous year. The main recipient of these products were EU-28 countries, whose share in export amounted to 97%. EU-15 received ca. 43 thousand tons of poultry products (19% increase), while EU-13 – 20 thousand tons. Poultry product imports in 2014, amounted to ca. 8 thousand tons, and was ca. 20% lower than in the previous year. They came mostly from EU-28.

Poultry livestock exports in 2014, decreased again to approx. 77 million heads (by 9%), with a 6% decrease in export value, to 68 million Euro. The main recipient from Poland (in quantitative terms), like the year before was Ukraine (70% of the Polish export), then Belarus (13%), Germany (4.7%) and Russia (3.4%). The largest revenues

from poultry livestock sales came from trade with Germany (30 million Euro – 44%), then with the Ukraine (18 million Euro – 26%) and Russia (10 million Euro – 15%).
Poultry livestock import to Poland in 2014, was higher than the year before by 16% (58 thousand tons in meat equivalent, i.e. ca. 86 million heads), with a growth in expenses to 133 million Euro (by 22%). The main supplier were EU countries, including: Germany (26% of import value), the Czech Republic (18%), the Netherlands (16%) and Slovakia (13%). The balance of commercial exchange in poultry livestock in 2014, has deteriorated to minus 65 million Euro, as compared to minus 37 million Euro in 2013.

Pork

Pork exports (livestock, meat, products and fats) in 2014, amounted to ca. 640 thousand tons in product weight, and was over 9% (ca. 67 thousand tons) lower than in the previous year. The value of export amounted to 1.3 billion Euro, and was 15% lower than the year before. Export reduction was also affected by restrictions introduced by some countries of the Customs Union: Russia, Belarus, Kazakhstan, as well as the Ukraine [2] and China (since 13.02.2014), Japan and South Korea, (since 18.02.2014), Taiwan (since 19.02.2014), Singapore (since 22.02.2014), Azerbaijan and Georgia, after confirming cases of African swine fever (ASF) in Poland, as well as the introduction in August 2014 of embargoes by Russia (on i.a. all pork products).
In 2014, pork imports to Poland have increased by 2.5%, to more than 825 thousand tons, with nearly a 4% decrease in value to 1.74 billion Euro. A deficit in trade turnover with these products amounted to 447 million

[2] On 27.01.2014, as a result of identification of two cases of ASF in wild boars in Lithuania, the Russian Federation banned export of pork from the territory of the whole EU (cessation of issuing veterinary certificates), and on 27.02.2014, it banned import of pigs, their genetic material and pork products not subjected to thermal treatment from Poland, and since 7 April 2014, import of pork products from Poland is banned; 20.02.2014 – Belarus introduced a ban on import of live pigs, pork meat and their products, genetic material, hooves, feed from Poland; The ban on the export of pigs, pork meat and their products to Ukraine was in force since 17.02.2014 to 18.06.2014; since 25.07.2014, import to Ukraine from the Podlaskie Province is banned.

Euro, as compared to 283 million Euro in 2013, and quantitative surplus of import over export amounted to 187 thousand tons in product weight, and was 87 thousand tons greater than the year before.

The commodity structure of pork exports in 2014, like the year before, was dominated by fresh (cooled) and frozen meat, which constituted nearly 60% of the total export volume. The share of products (sausages, canned meat, hams, smoked and salted meat) was 28%, fats – 11%, and livestock in meat equivalent – 1%.

In 2014, pork exports (fresh, cooled, frozen) decreased by 14.5% to 380 thousand tons, with sales revenues decreasing by 24%, to nearly PLN 700 million Euro. This was a result of i.a. reduced sales prices The geographical structure of major recipients of Polish has also changed. The significance of the EU countries has increased, and their participation in pork export volume expanded to 76%. The share of countries outside the EU decreased to 24%, and export to the CIS countries decreased from 25% in 2013, to 9% in 2014, which was mainly a result of the share reduction of Russia from ca. 8% to ca. 1% and Belarus from 6.9% to 0.4%.

In 2014 the EU member states received in 278.5 thousand tons of pork, which translates in a 24% increase (i.e. by 53.5 thousand tons) as compared to the previous year. Export to EU-15 countries increased by 32.6 thousand tons to 140.6 thousand tons, and EU-13 by ca. 20.8 thousand tons to 137.9 thousand tons. The highest revenues from pork sales in 2014, came to Poland from trade with Italy, which bought ca. 53 thousand tons for 90 million Euro (increase by 10%). Second place was held by Slovakia (+15%), where almost 40 thousand tons of pork were sold for 82 million Euro and, with subsequent places held by: the Czech Republic (exports of 25 thousand tons for 73 million EURO), Germany, (42 thousand tons for 53 million EURO), and the USA, which increased pork purchases 4.5 times (to 18 thousand tons for 46 million EURO). Pork exports to CIS countries decreased in 2014, quantity-wise by 88%, to 13 thousand tons, and value-wise by 89%, to 28 million Euro.

In 2014, a slight increase in the import volume of pork to Poland was recorded (by ca. 2%), to 618 thousand tons, while value-wise it was reduced to 1.2 billion Euro (i.e. by ca. 3.8%). Imported pork, like in 2013, originated mainly from the EU-15, and its largest suppliers were: Germany (29.6% share total import value), Belgium (22.7%), Denmark (16.9%), the Netherlands (10.2%) and Spain (7.6%). Import was dominated by fresh, cooled pork, intended for further processing. A deficit is still present within pork trade, which in 2014, increased quantity-wise to 238 thousand tons in produce weight, i.e. by 48%, and value-wise – to 551 million Euro, i.e. by 45.5%.

In 2014, the balance of foreign trade in swine improved by 25 million Euro to minus 401 million Euro. Swine exports in meat equivalent decreased by 25%, to 7.8 thousand tons, i.e. to ca. 90 thousand heads (in 2013, it was 10.4 thousand tons, and 83 thousand heads). The quantitative growth of large swine import was continued, amounting in 2014 to 5.42 million heads (5.4%increase), with 6% lower expenses, which resulted from lower import prices (2.28 Euro/kg). Poland imports mainly pigs and piglets. The largest supplier, like the year before, was Denmark, the import from which constituted 50% of total import for 213 million Euro (3.4 million heads – increase by 30%), with subsequent places held by: Germany – 65 thousand tons for 137 million Euro (33% of import value), with a recorded 16% decrease in expenditures, and Lithuania – 18 thousand tons for 29 million Euro (7%), 29% decrease in import value. The main recipient of Polish livestock is still Hungary, whose share in export values in 2014, decreased by 15% , to 41%, with a 50% drop in export volume (3.2 thousand tons in meat equivalent, which corresponds to 24.8 thousand heads). 2nd was held by the Czech Republic, where we sold 21.3 heads of swine for 3.4 million Euro. The balance of commercial exchange in livestock in 2014, was already minus 5.31 million heads, as compared to minus 5.06 million heads in 2013, and value-wise exceed minus 400 million Euro.

Pork products export (sausages, canned meat, hams, smoked and salted meat) in 2014, amounted to 178 thousand tons, and was 3.6% higher than the year before. It was mainly exported to EU countries, including: The UK, Denmark, Lithuania, Germany, and the Czech Republic, as well as to the USA. Pork product imports has remained at a similar level of ca. 15 thousand tons, and its main suppliers the EU member states.

Beef

In 2014, foreign trade turnover in beef (livestock, meat and products) amounted to 1.1 billion Euro and was 4% lower than the year before. This resulted i.a. from the drop in transaction prices of both export and import. Beef exports increased by 0.1%, to 340 thousand tons in product weight (livestock in meat equivalent), with ca. 6% lower sales revenues (1.05 billion), and import increased by 23%, to 37 thousand tons for 115 million Euro. The positive sales turnover balance has deteriorated by 7.8%, to 933 million Euro. The commodity structure of beef export was dominated by fresh, cooled meat (64% of export volume). The share of frozen meat was 21%, beef products 11%, and livestock (in the meat equivalent) 4%. Import remains small, abroad we buy mainly livestock (50% of import volume), and beef (44%). Polish beef in 2014, was still competitive price-wise on the EU market, therefore restrictions imposed by Russia on import from Poland did not have a great impact on Polish beef exports. The main sales market for beef products in 2014, was the EU, whose share in the value of export amounted to ca. 87%.

In 2014, beef export (chilled and frozen), was at the same level as the previous year, and amounted to 290 thousand tons in product weight. We exported mainly cooled beef (ca. 218 000 tons), the sales volume of which has decreased as compared to the previous year by 6% (with a 10% drop in export value). Its main recipient were the EU-15 countries (85% share), – 185 thousand tons, with the largest purchases made by Italy (62 thousand tons for 219 million EURO), Germany (37 thousand tons for 94 million EURO), and the Netherlands (30 thousand tons for 76 million EURO).

Frozen beef exports in 2014, amounted to ca. 70.9 thousand tons, and was 23% higher than the year before, and its main recipient was France (16% of export volume), which increased beef purchases in Poland by 30%. The second place was held by Germany (11% of export volume, increase by 55%). The third by Sweden (6.5%), and subsequent by the Netherlands (6%), and Italy (4%).

Beef imports (fresh, cooled, frozen), in 2014, amounted to ca. 14 thousand tons (15% increase). Expenditures on beef purchases were also increased, to 45 million Euro (by 5%), The import commodity structure was dominated by fresh, cooled meat (75%) purchased mainly from: Germany (27%), Ireland (18%), Slovakia (15%), the Czech Republic, and the UK (10% each), Frozen beef, like the year before, we purchased mostly from: Ireland (26%), Germany (20%), the Czech Republic, (15%), and the UK (12%). The beef turnover balance (fresh, cooled, frozen), in 2014, was on a similar level as in the previous year, amounting to 276 thousand tons in product weight, and value-wise, was reduced by 6%, to 850 million Euro.

Livestock export in meat equivalent in 2014, amounted to 11.5 thousand tons, and was lower than the year before by 20%. Revenues from export decreased by 22%, to 52.5 million Euro. The main recipients of Polish livestock in 2014, like the year before were: Italy (28% of export value), Greece (16%), the Netherlands (12%), and Croatia (10%). Livestock import increased by 19%, to 15.6 thousand tons (in meat equivalent), with a growth in expenses by 15% (55.3 million EURO). Imported animals came mostly from Slovakia (24%), Germany (18%), Denmark (16%), and Lithuania (12%). The cattle turnover balance has deteriorated value-wise by almost 22 million Euro, to minus 2.8 million Euro.

Beef product exports increased by 33%, to 26 thousand tons, with a 19% revenue increase to 87 million Euro. Their main recipient were EU countries. Import was small, and amounted to 1.9 thousand tons for 7.1 million Euro.

Milk and dairy products[3]

The Polish dairy sector is a net exporter, as the production of raw milk is 10-12% larger than domestic consumption. Supply surplus is exported, which in 2014, increased by 11%, to the record level of 1.8 billion Euro. In the same period, imports increased almost by 12%, to 707 million Euro. The positive sales turnover balance was 1.1 billion Euro, and was 11% greater than in the previous year. The growth of commercial turnover took place in spite of a drop in prices on the international market, and Russian embargoes.

[3] The name "dairy products" covers: liquid milk and sour cream, powdered milk, yoghurts and milk beverages, whey, butter, cheese and cottage cheese.

The most important items in Polish dairy exports in 2014, were traditionally cheese and cottage cheese, however, their share in the export structure decreased by 6.2%, to 36.8%, amounting to 663 million Euro, as compared to 692 million Euro in 2013, i.e. 4.2% less. In 2014, Poland exported 207 thousand tons of cheese and cottage cheese, mainly to: The Czech Republic (26 thousand tons), Germany (22 thousand tons), Italy (18 thousand tons), and Russia (17 thousand tons), which in 2013 was the largest recipient of cheese from Poland (nearly 30 thousand tons). Second place was held by powdered milk, mainly skimmed (OMP), whose export value in 2014, increased by 66%, to 438 million Euro, and sales volume to 158 thousand tons. The largest quantities of milk powder were sold to: Algeria (41.5 thousand tons), Germany (16.3 thousand tons), the Netherlands (10.1 thousand tons), and China (7.5 thousand tons). Third place, with a nearly 15% share in export structure, was held by liquid milk and sour cream, whose export value increased by nearly 17%, to 269 million Euro (385 thousand tons). The main market for Polish milk and sour cream remains Germany (233 thousand tons). Large quantities of these products were sold to new EU member states, among others: Lithuania, Romania and Hungary (ca. 15 thousand tons each). The export value of yoghurts, kefirs and other milk-based drinks increased by ca. 10%, to 132 million Euro. The largest quantities of these products were sold to the Czech Republic, Italy and Hungary (ca. 14 thousand tons each). Butter exports increased by 9%, to 35.4 thousand tons. The export value was reduced by 0.8%. Butter was sold mainly to the EU market (32 thousand tons), including the Czech Republic (6 thousand tons) and Germany (5 thousand tons). The share of final consumer products within the structure of Polish dairy exports has decreased, and simultaneously, the share of semi-finished products used for secondary processing has increased. The total share of cheese and cottage cheese, as well as butter, yoghurts and fermented beverages within the value structure decreased from 57.4% in 2013, to 50.3% in 2014. At the same time, within the export value structure, the share of powdered milk, whey, liquid milk and sour cream increased from 42.6 to 49.7%. Stopping the growth trend in the export of processed products, was the result of changes of market conditions, as sector entities processed large quantities of raw materials into products, which may be stored for a long period. The crash of cheese export to Russia resulted in the dairy industry increasing sales to Algeria and countries of Asia, which report demand mainly for milk and powdered whey.

The geographic export structure in 2014 has also seen some changes, which were a result of Russian embargoes, and the need to reach new markets. The share of EU countries within the export structure has decreased from 73 to 66%, and of CIS states from 11 to 8.4%. In the state structure, the main recipients of Polish dairy products in 2014 were: Germany (346 million EURO), the Czech Republic (140), Algeria (138), Italy (117), the Netherlands (105) and Russia (96).

In 2014, imports increased of most dairy products, except for concentrated whey and powdered milk. The import value of dairy products amounted to 707 million Euro, and was almost 12% higher than the year before. Within the import commodity structure no larger changes have occurred. The main items in the imports structure are still cheese and cottage cheese, 246 million Euro worth of which has been purchased (11.5% more than in 2013), and which constituted 35% of the total import of dairy products. Second place, with a 29% share, was held by powdered milk, the import of which increased to 112 thousand tons, i.e. 33%, with a growth purchase expenditures to 203 million Euro, i.e. by 31%. Other dairy products, similarly to the previous years, were of lesser importance in dairy imports.

Within the dairy import geographical structure, EU-28 countries have for years been dominant, with a share in 2014, amounting to 95% (ca. 672 million EURO). Other countries were of marginal importance in the importation of dairy products. The main trading partners were the following member states: Germany (45.2% of import value), Ireland (11.6%), the Netherlands (10.5%), Lithuania (9.4%), and France (7.4%),

Fruit and fruit products

The export value of fresh fruits and fruit products in 2014 was 12% lower than the year before, amounting to 1.7 billion Euro. Import remained at a similar level as in the previous year (1.6 billion Euro). The positive turnover balance amounted to 102.4 million Euro, and was nearly 70% lower than in 2013. Balance deterioration resulted mostly

from difficulties in trading with Russia and the introduction by this country of an embargo on product importation, i.a. fruit and a drop in re-exports of southern fruit.

The fruit and fruit product export commodity structure (sans southern fruit re-exports), value-wise, was dominated by concentrated and regular juices (31.4% of total export), frozen fruit (25.9%), apples (21.7%), other products (10.6%), and other fruit (4.2%). Fresh fruit export in 2014 was 12% less than in 2013, and amounted to 1.3 million tons, and the sales value thereof has decreased to 597 million Euro, i.e. by 18%. Apple export in 2014 decreased by 14%, to 1.1 million tons (Russian embargo). They were exported mainly to CIS markets, but the share of those countries in the export volume dropped from 75 to 72% (Russian share has decreased from 55 to 38%). At the same time, the share of Belarus grew from 12 to 25%, as well as that of Kazakhstan, from 4 to 6%. The share of the EU-28 in Polish apple export increased from 23 to 25%, and of other countries from 2 to 3%. At the end of 2014, apple sales to countries with little significance for Polish export increased in previous seasons, among others, to: Kuwait, Turkey, Serbia, the United Arab Emirates. Export quantities decreased for: pears, cherries, sweet cherries, black currants, as well as bilberries and blueberries. At the same time an increase was noted of: strawberries, plums, raspberries, red and white currants and gooseberries.

Southern fruit re-export value, resulting from a decrease in sales prices and sales restrictions to the CIS, was reduced by 13%, to 113.9 million Euro. Re-export decreased of: tangerines, oranges, grapefruit, grapes and kiwi fruit. Re-export increased of: bananas, lemons, nuts, watermelons, peaches and nectarines. The largest recipients of re-exported fruit was the Ukraine, whose share in the total value of Polish re-export decreased from 53% in 2013, to 42% in 2014, Belarus (increase from 12 to 14%), and Russia (decrease from 12 to 8%). The share of the EU-28 in the value of fruit re-export increased from 23 to 34% (the share Germany, Lithuania, Romania and the Czech Republic increased).

In 2014 export volume of fruit products increased to 864 thousand tons, i.e. by 3%, and its value, as a result of the drop in average export prices, has decreased by 8%, to 1.1 billion Euro. Export of concentrated apple juice (along with the re-export of juice imported from the Ukraine and Moldova) decreased by 2.5 thousand tons, to 261 thousand tons, and its value was 24% lower and amounted to 276 million Euro. The main recipients of concentrated apple juice were Germany (54% of export value), the UK (10%), and the Netherlands (9%). Export of concentrated apple juice to Russia has significantly increased – from 0.5 to 12 thousand tons. Sales of other apple juices remained at

the level of 65.6 thousand tons. Frozen fruit export increased by 2% and amounted to 318 thousand tons. Sales increased of: frozen strawberries, black currants, bilberries and blueberries, with a simultaneous decrease in the sales of: raspberries, red currants, cherries and sweet cherries. In 2014, export (and re-export) of canned fruit increased by 8%, to nearly 60 thousand tons, and the sales value thereof increased by 6% and amounted to 110.5 million Euro. Dried fruit export decreased by 6%, to 6.2 thousand tons, and the sales value thereof, due to higher prices, increased by 17%, to 18.4 million Euro. Export of jams, confitures and purees increased by 9%, to 33.2 thousand tons.

The value of export of fruit and fruit products to the EU-28 has decreased by 9%, to 1.14 billion Euro. The share of the EU in the total sales value of fruit and fruit products increased from 65 to 68%. The main recipient of these products were still Germany, the UK and the Netherlands. Export to the EU-28 is dominated by fruit products, although their share in the total export value to this market, dropped from 88 to 86%. Export the CIS decreased by 23%, to 454.5 million Euro (the share decreased from 31 to 27%). Sales value to Russia was nearly 40% lower, and amounted to 233 million Euro. Fresh fruit export to Russia decreased by 46%, to 171 million Euro, and of fruit products by 7%, to 62 million Euro. The share of Russia in the total export value of fruit and fruit products decreased from 20 to 14%, and the Ukraine from 6 to 5%. At the same time the share of Belarus has increased – from 4 to 7%. The export value of fruit and fruit products to Belarus increased by 52%, to 118 million Euro. The growth was determined by higher exports of most of fresh fruit (mainly apples) as well as frozen, canned and dried fruit.

Fresh fruit import in 2014 dropped, as compared to the previous year to 1.3 million tons, i.e. by 3%, and value-wise, in connection with higher prices, increased to 1.1 billion Euro, i.e. by 4%. Import volume of southern fruit decreased by 3%, to 1.2 million tons, and its value increased slightly to 935.5 million Euro. Import increased of: bananas, watermelons, nuts, avocado, apricots, nectarines and peaches. We imported less: oranges, tangerines, lemons, grapefruit, grapes, kiwi fruit, and pineapples. Apple import was 53% less than in 2013, and amounted to 19.8 thousand tons, and the importation value thereof decreased to 12.6 million Euro, i.e. by 25%. The size of fruit product import in 2014 has decreased by 3%, and amounted to 369 thousand tons, and its value was reduced slightly, to 534 million Euro. Import of concentrated and regular juice decreased quantity-wise by 4%, to 175.6 thousand tons, and its value, as a result of a drop in import prices, was lower by 13%, and amounted to 158 million Euro. Import of concentrated apple juice decreased by 15%, to 78.7 thousand tons. Apple juice import value, as a result of increasing the share of cheaper, Ukrainian concentrate (from 39% in 2013, to 48% in 2014), was reduced by 44%, to 32 million Euro. The share of Moldova has remained at the level of 21%, and Hungary's decreased from 12 to 8%. The size and value of frozen fruit exports were smaller than the year before, and amounted to 42 thousand tons and 70 million Euro, as compared with 44 thousand tons and 73 million Euro in 2013.

The value of fresh fruit and fruit product imports from the EU-28 was reduced by 1.3% to 828 million Euro. At the same time, the share of these countries in the import of these products dropped from 53 to 52%. The main supplier of these products were Spain, Germany and Italy. The import value from the CIS was reduced from 64 to 48 million Euro, and its share decreased from 4 to 3%. From among other countries, the largest suppliers of fruit and fruit products to Poland were Turkey and Ecuador.

The positive turnover balance of fruit and fruit products with the EU-28 was reduced from 407 million Euro in 2013, to 311 million Euro in 2014, and with the CIS, accordingly from 530 to 407 million Euro. The turnover balance with other countries was negative, and in 2014 amounted to 615 million Euro, as compared with 605 million Euro in 2013.

Vegetables and vegetable products

The export value of vegetables and vegetable products in 2014 amounted to 689 million, and was 4% lower than in 2013. The import value of these products increased by 4%, to 654 million Euro. The positive turnover balance amounted to 35 million Euro, as compared with 89 million Euro the year before. The balance deterioration was

mainly due to a decrease in sales of fresh vegetables as well as frozen and dried products, connected with the Russian embargo, as well as higher import of most vegetable products.

The export value champignons and champignon products in 2014 increased by 2%, to the record level of 393.4 million Euro. The import value decreased by 3%, to 6.5 million Euro, and the positive turnover balance in this group of products amounted to 386.8 million Euro. Export was comprised mainly of fresh champignons (ca. 75% of sales value), which were sold mainly to the EU-15 (ca. 66% share in export volume). The largest recipients of Polish champignons were Germany, the UK and France.

In 2014 the export volume of fresh vegetables was 3%, higher than the year before, and amounted to 521 thousand tons, while its value was decreased by 2%, to 256 million Euro. Vegetable product export decreased by 12%, to 584 thousand tons, and its value by 5%, to 433 million Euro. Export of fresh vegetables was still dominated by tomatoes, though their volume has decreased by 9%, to 98 thousand tons, and the share in export value has decreased from 33 to 29%. Tomatoes were sold primarily to Belarus (its share in the sales volume increased from 17 to 31%), as well as to Russia (share decrease of from 48 to 23%). White and red cabbage export increased by 44%, to 75.5 thousand tons, and of other cabbage varieties (mainly Chinese) decreased by 15%, to 72.6 thousand tons. Despite a significant drop in the share from 51 to 41% in the total sales value, the main recipient of cabbage is still Russia. At the same time the share of Belarus has significantly increased (from 8 to 20%). Also, export revenues were higher for: carrots, cauliflowers, onions, cucumbers, lettuce, Brussels sprout, and asparagus. And lower for: paprika, celery and leek. Vegetable product export decreased by 12%, to 584 thousand tons, and the sales value thereof decreased by 5%, to 433 million Euro. Vegetable products export was dominated by frozen products, and their share in the total sales value of processed vegetables, decreased from 54 to 49%. Export volume of frozen food products was 15% lower, amounting to 383 thousand tons, and that of canned vegetables was decreased by 3%%, to 61 thousand tons. A the same time, an increase was recorded in the exports of canned products from legumes. Export of frozen ready-made meals, as well as of sauerkraut cabbage decreased. Sales of provisionally preserved vegetables (mainly onions and paprika) and of dried vegetables have increased. Sales of tomato products has decreased by 4%, to 43.2 thousand tons.

The export value of most vegetable products (except frozen products) was higher than in 2013. The largest revenue increase was noted in the sales of dried vegetables and tomato products (except ketchup).
The share of the EU-28 in the total export value of these products increased from 66 to 69%. The main recipients of Polish vegetables and products were still: Germany, the UK, the Czech Republic, France, and the Netherlands. Export to EU-28 was dominated by processed vegetables (ca. 70% of sales value to this market). The importance of the CIS in the total export value of vegetables and vegetable products dropped from 29 to 26%. Sales to Russia decreased by more than 31%, to 102 million Euro, and to the Ukraine – by 12%, to 27 million Euro (Russian share decreased from 21 to 15%, and Ukraine's remained at the level of 4%). Export to Belarus increased by over 70%, to 46 million Euro, and its share increased from 4 to 7%. From among other countries, the largest recipient of Polish vegetables and vegetable products were the USA (ca. 2% share).
In 2014, fresh vegetable import was 11% higher than the year before, and amounted to 513 thousand tons, and its value increased by 2%, to 429 million Euro. Vegetable product imports increased by 7%, to 216 thousand tons, and the value thereof by 8%, to 225 million Euro. Import of most fresh vegetables increased (except carrots, cucumbers and garlic). The largest increase was recorded for the import of white and red cabbage (56%, to 14.5 thousand tons), onions (32%, to 94 thousand tons), and paprika (14%, to 52 thousand tons). Tomato imports increased by 2%, to 143 thousand tons. Tomatoes were mostly imported from Spain, the Netherlands and Morocco (deliveries from those three countries, constituted more than 75% of the tomato import volume). Also larger was the importation of lettuce, celery, leek, and spinach. The import of vegetable products are dominated by tomato products. Total share of these products in the import value of processed vegetables increased from 32 to 35%. Tomato paste import increased by 5%, to 61 thousand tons, with a decrease of purchases from China by 20%, to 21 thousand tons, and Italy – by 19%, to 11 thousand tons. Tomato paste import increased from Spain, the Ukraine, Germany and Greece. Import of both canned tomatoes and ketchup increased by 10%, to accordingly 17.8 and 4.6 thousand tons. The share of frozen vegetables was maintained at the level of 15% (import of 43.7 thousand tons), and of dried vegetables – 14% (23.5 thousand tons).
The import value of vegetable products from the EU-15 increased by 3%, to 532 million Euro, and from the EU-13 decreased by 5% to 41 million Euro. The total share of those countries in the Polish import of vegetable products decreased from 87 to 85%. The largest suppliers of fresh vegetables to Poland were Spain, the Netherlands and Germany (the total share of these three countries amounted to 75%). Processed vegetables were purchased mainly from Germany, Spain, Italy, and Hungary. From among other countries, the largest suppliers were China (mainly tomato paste, dried, canned and frozen vegetables), Morocco (mainly tomatoes), and Turkey (tomatoes, cucumbers and dried vegetables). A negative turnover balance in the sales of vegetable products with the EU-28 dropped further from 70 to 83 million Euro. The deterioration of trade in vegetable products was mainly determined by an increase in the import of tomato products and most fresh vegetables. The positive balance of the sales volume with the CIS, mainly as a result of restrictions in export of fresh and frozen vegetables to Russia, was reduced from 146 to 137 million Euro.

AGRICULTURAL SUPPORT POLICY

Direct support of agricultural income

Poland, just like most new EU member states introduced the Single Area Payment Scheme (SAPS), under which a uniform area payment is paid, along with national support (Transitional National Aid – TNA), which in 2014 was realized in the form of a decoupled payment to humulus, starch, and tobacco. Additionally, Polish farmers could count on other payment, i.e.: a separate sugar payment, a separate tomato payment, a separate soft fruit payment, and since 2010, on support special in the form of: payments to cows, sheep, special leguminous plant and small-seeded fabaceae, and since 2012, also for supporting high quality tobacco.

During the 2014 campaign, direct payments were sought by 1.35 million farmers. The maximum amount for direct payments was 14.24 billion PLN. Total direct payments under the 2004-2014 campaign, amounted to ca. 121 billion PLN (as of 31.05.2015).

Direct payments after 2014

In the years 2015-2020 all member states, including Poland, have introduced a new system of direct payments. According to the Regulation (EU) No. 1307/2013 of the European Parliament and of the Council of 17 December 2013 *establishing rules for direct payments to farmers under support schemes within the framework of the common agricultural policy and repealing Council Regulation (EC) No. 637/2008 and Council Regulation (EC) No. 73/2009* (Official Journal Of the EU L 30 of 31.01.2009, p. 16, with later amendments), Poland introduced the following elements of the direct payment system:

- single area payment,
- payment for agricultural practises beneficial for the climate and the environment (greening),
- payments for young farmers,
- production payments (cattle, cows, sheep, goats, soft fruit, humulus, high-protein vegetables, sugar beets, starch potatoes, tomatoes, flax and fibrous cannabis),
- additional payments,
- payment for small holdings.

In addition, Poland has taken advantage of the possibility to continue in the years 2015-2020, the temporary national support for tobacco.

According to the aforementioned by means of regulation directed solely to the so-called active farmers. In the case of natural or legal persons, whose annual amount of payments exceeds 5 000 EURO, payments shall not be granted, if they manage airports, water supply pipelines, permanent sports and leisure areas, as well as provide railway transport or services with regard to real estate, unless they document:

(1) annual amount of direct payments is at least 5% of the total revenue obtained by them for non-agricultural operations;
(2) their agricultural activities are not of a marginal nature, i.e. total revenues from agricultural activities in their case constitute at least 1/3 of total revenues;
(3) the main part of their business or business activities is agricultural activity.

Under CAP, direct payments in 2014-2020, in the EU budget have been planned to constitute a total of 21.15 billion EURO. In addition, Poland has taken advantage of the possibility to shift 25% of the 2nd pillar envelope for 2015-2020 to the 1stpillar. This means a growth in direct payments of 2.34 billion EURO, to ca. 23.5 billion EURO.

Single area payments

Poland still uses a simplified system of direct payments, the basic part of which are single area payments (SAP). The payment shall be granted for each qualifying hectare. The single area payment in each case shall be decreased by 100% of the surplus for such a payment of more than 150 thousand EURO. According to EU regulations, the amount obtained as a result of the use of this mechanism supplies the PROW budget.

Support for young farmers

This operation is mandatory for each member state. This type of support consumes up to 2% of the national envelope. Payments shall encompass farmers commencing operations for the first time in the role of holding manager, or who have established such a farm within five years prior the first application submission under the single area payments, and whose age at the moment of application submission does not exceed 40 years. This support shall also be paid to a legal person or a group of natural or legal persons.

Production-related support

Poland fully used the possibility of directing 15% of the national envelope to production-related payments (maximum percentage allowed by EU Regulations), i.e. more than 500 million Euro annually. The payment is applied in the following sectors: cattle, cows, sheep, goats, soft fruit (strawberries and raspberries), humulus, high-protein vegetables, sugar beets, starch potatoes, tomatoes, flax and fibrous cannabis.

The purpose of payments related to production, is support for sectors of particular economic, environmental or social importance, and those in a difficult situation. Under EU regulations, this payment is supposed to be only an incentive to maintain up-to-date production levels in the aforementioned sectors.

Payments for livestock

Farmers may obtain support related to animal production in the form of payments **to cattle**, payments **to cows**, payments **to sheep**, and payments **to goats**. The aforementioned related payments shall be granted if the applicant owns a minimum required amount of qualified livestock, i.e. in the case of:

- payments **to cattle** – at least 3 heads of cattle aged 24 months or less. The payment shall be granted to heads from 1 through 30;
- payments **to cows** – at least 3 heads of cows aged 24 months or less. The payment shall be granted to heads from 1 through 30;
- payments **to sheep** – at least 10 heads of ewes aged 12 months or more. Payment shall be granted to all heads of those species kept in the holding;
- payment **to goats** – at least 5 heads of female goats aged 12 months or more. Payment shall be granted to all heads of these animals in the holding.

Animal age checked as of 15 May of the year of application submission. In the case of payments to cattle, payments cows, and payments to goats, the farmer is obliged to keep animals in the holding for over 30 days from the date of submitting the payment application, whereas, in the case payments to sheep animals are to be in possession of the farmer at the day of submission of the application for payment, and must be kept in the holding from 20 October until 20 November.

Payments shall be granted to animals for which, prior to the day of submission of the application for granting the payment, reports were made on the basis of the provisions on animal identification and registration, and at the latest, from the date of submitting the application for granting the payments, requirements are met in terms of identification, as specified in the provisions on animal identification and registration. Therefore, if the animals are registered and properly identified in accordance with the above principle, they will be qualified for payment regardless of any possible shortcomings with regard to the AIR requirements occurring in the previous period.

Payments to soft fruit

This payment shall be granted to the cultivation area of strawberries or raspberries. A cultivation contract is not required, which allows for payment coverage of not only cultivation area of fruit directed to processing, but also high quality consumer fruit, including of fruit for direct sales.

Payments to high-protein plants

The payment shall be granted to the cultivation area of high-protein plants in the main crop, no greater than 75 ha. Plant species eligible for support: broad bean, field bean, cicer, sainfoin, common beans, runner beans, grass peas, sugar peas, red clover, white clover, alsike clover, Persian clover, crimson clover, Lotus corniculatus, vetch, field lucerne, sand lucerne, black medick, white lupin, blue lupin, yellow lupin, honey clover, field peas, seradela, lentils, soya bean, hairy vetch, common vetch.

Payments to high-protein plants shall also be granted in the case of the above mentioned cultivations in the form of mixes, excluding mixes plants with plants other than listed, provided that in the case of the common vetch, hairy vetch, this payment shall be granted for their cultivations with a support plant.

Payment to humulus

Payments to humulus shall be granted for the humulus cultivation area, located in the Lubelskie, Wielkopolskie and Dolnośląskie provinces.

Payment to sugar beets

Payment to sugar beets shall be granted for areas wherein are quota beets are cultivated, covered by the contract.

Payment to starch potatoes

Payment to starch potatoes shall be granted for areas wherein starch potatoes are cultivated, covered by the contract on starch potato cultivation.

Payment to tomatoes

Payment to the cultivation area of tomatoes shall be granted for areas wherein tomatoes are cultivated, covered by the contract on the cultivation of tomatoes.

Payment to flax

The payment shall be granted for the flax cultivation area on the grounds qualified for the payment.

Payments to fibrous cannabis

The payment shall be granted to the cultivation area of fibrous cannabis, unless the farmer uses varieties with a maximum of 0.2% of tetrahydrocannabinol (THC) content in dry plant matter. This payment, like other area payments to this cultivation, is granted on the condition that cultivation is maintained on the basis of a permission issued according to Art. 47 of the Act of 29 July 2005 on Counteracting Drug Addiction (Journal of Laws of 2012 item 124, with later amendments), or to an area no greater than the area covered by this permit.

Additional support

Additional payment is granted for an area between 3.01 ha and 30 ha. This means that the maximum number of hectares in a holding, covered by this payment, is 27. Support under the additional payment is therefore focused on the group of small and medium holdings. It allows for more effective support of income for holdings, which do not achieve such benefits resulting from the scale of production, as the largest holdings, however have the chance for stable development.

System for small holdings

In the case of a holding's participation in the system for small holdings, the proposed support shall replace all kinds of support realized within the system of direct payments (except temporary national support). Farmers participating in the payment system for small holdings shall be exempt from standards inspection and requirements of cross-compliance, as well as from the obligation to apply practices with regard to greening. Farmers may join the system only in the first year of its realization, i.e. in 2015. Farmers receiving payments under the direct payment programme no higher than 1250 EURO/holding shall be included automatically, unless they withdraw their consent.

Transitional national aid

Transitional national aid covers the tobacco sector. It is the only thus far supported sector, with regard to which, EU regulations do not provide the possibility of using payments related to production. According to the EU regula-

tions, conditions for receiving this support must be identical with those which have been approved with regard to 2013. Such assistance is of a degressive nature, i.e. every year the amount of support is decreased by 5%, starting from 75% in 2015, and ending on 50% in 2020.

Greening

Under the new system of direct payments an obligation has been introduced since 2015, of realizing agricultural practices favourable for the climate and the environment, the so-called greening. It is funded by 30% of the national financial envelope, i.e. ca. 1 billion EURO annually. Greening is done by means of:

1) cultivation diversification;
2) maintaining environmentally friendly areas (so-called EFA) and
3) maintaining permanent grasslands (TUZ).

All farmers entitled to the single area payment are obliged to realize greening. Depending on the number of owned arable lands in a holding, and the participation of permanent grasslands, farmers are obliged to comply with one, two, or three greening practices.

EU regulations stipulate a number of exclusions from the obligation of complying with them, i.a., holdings where more than 75% of arable lands are permanent grasslands, or holdings with a high (more than 75%) participation of arable land used for the production of grasses and other herbal fodder plants or fallowed, due to the beneficial environmental impact, are exempt from the obligation to diversify cultivations, or maintaining environmentally friendly areas, provided that other agricultural land do not exceed 30 ha.

Holdings participating in the system for small agricultural holdings, despite being exempt from greening, are authorized to receive such payment.

Payment for greening will be granted automatically by farmers conducting agricultural production according to the principles of organic agriculture[4] – this provision shall apply only to the part of the agricultural holding area, which is used for organic production according to Art. 11 of the Regulation (EC) No. 834/2007.

In the case of farmer's noncompliance with greening practices, administrative penalties shall be issued, consisting of reducing the amount of direct payments received in a given year. For the first two years of greening implementation (2015 and 2016), these penalties shall not exceed the amount of received payments for greening, and dependent on the degree of observed inconsistencies, shall include a part or the entirety of payments for greening. In subsequent years the penalties shall be able to exceed the amount received for greening (in 2017 by a maximum of 20%, and from 2018 by a maximum 25%), which means that in some cases, in the event any inconsistencies are observed, the penalty for non-compliance with greening practices will also result in a partial reduction in other payments.

With regard to cultivation diversification holdings with 10-30 ha of arable lands are obliged to rear 2 different cultivations[5] on arable lands, with the main cultivation, not covering more than 75% of arable lands. Holdings with more than 30 ha of arable lands are obliged to conduct at least 3 different cultivations on arable lands, with the main cultivation, not covering more than 75% of arable lands, and two main cultivations together cannot cover more than 95% of arable lands.

In addition, crop diversification realization is possible through equivalent practice under Operations o the agri-enviro-climatic RDP 2014-2020, by implementation of the requirement of: *The use of a minimum of 4 cultivations in the main crop in a year, including the share of the main crop and cereals total in the sowing structure must not exceed 65, and the share of each cultivation cannot be less than 10%.*

Holdings with the total area of over 15 ha of arable lands are obliged to include ecological focus areas – EFA in

[4] Fulfilling the requirements specified in Article 29 (1) of the Regulation (EC) no. 834/2007.

[5] A separate cultivation includes: the genus in the botanical classification of crops, winter and spring variety of the same genus, species from the families of crucifers (Brassicaceae), nightshades (Solanaceae) and cucurbits (Cucurbitaceae), fallow land, grass or other herbaceous forage.

the area of at least 5% [6] of arable lands. Determining the EFA area percentage is done by means of conversion and weighing coefficients, reflecting the diverse meaning of the aforementioned elements for biodiversity.
Ecological focus areas (the so-called EFA) include:

I. lanDscape **elements** – in the possession of the farmer, both these protected under the standards of Good Agricultural and Environmental Condition *(trees constituting natural monuments; water holes of a total area less than 100 m²; ditches of a width not exceeding 2 m)*, as well as the remaining elements meeting the following criteria:
   a. ***hedges or wooded strips*** – of a maximum width of **10 m;**
   b. ***free standing trees*** – of the crown diameter of at least **4 m**;
   c. ***linear wooding*** – including trees of the crown diameter of at least **4 m**; the distance between trees crowns should not exceed 5 m;
   d. ***group wooding***, crowns of which overlap, and in-field groves – of a maximum area of **up to 0.3 ha**;
   e. ***boundary strips* – of a width between 1 m and 20 m**, where agricultural production is not performed;
   f. ***water holes*** – of a maximum **surface up to 0.1 ha**, the water hole area includes a coastal vegetation strip no wider than 10 m;
   g. ***ditches*** – of a maximum width of **up to 6 m**;
II. **Fallow land** – on which **between 1 January and 31 July** in a given year **agricultural production is not conducted** ;
III. **Forested areas after 2008** under RDP 2007-2013;
IV. **Buffer zones** of a width established under DKR standards, and other buffer zones of a width **no less than 1 m and no greater than 10 m**; may also include coastal vegetation strips of a width of up to 10 m; agricultural production at the buffer zones is not to be performed, however grazing or mowing in these areas shall be possible, provided that this zone shall be distinguishable from adjacent arable lands;
V. **Land strips qualified for payment along forest edges** – of a width **between 1 m and 10 m**; conducting production on these strips is left to the farmer's decision; in the case when **production shall not be conducted**, grazing or mowing is acceptable, provided that, these strips will be distinguishable from adjacent arable land;
VI. **In-field groves with a short rotation** wherein it is not allowed to use plant protection products, and possible to apply mineral fertilizers within limits specified in separate regulations; groves considered as EFA shall encompass the tree species of the willow, birch and black poplar varieties and the crosses thereof;
VII. **Nitrogen binding cultivations** (i.e. fabaceae) – aiming to improve biodiversity;
VIII. **Intercrops or green cover** – in the form of: (a) **grass undersows** within the main cultivation, or (b) **mixes** created from at least 2 plant species from the following groups of cultivated plants: cereals, oilseeds, fodder, small-seeded fabaceae, broad-seeded fabaceae, and melliferous plant, sown and kept within certain time limits. Mixes comprised solely of cereals will not be recognized as an ecological focus area.

At the same time, a joint implementation of EFA practices is allowed by farmers whose holdings are located in close proximity, i.e. within a maximum radius of 15 km (i.e. in circle of 30 km), with the radius determined from the centre: (a) of a common ecological focus area, or (b) holdings; location of one of the farmers jointly realizing the practice of maintaining ecological focus areas.
In order to prevent mass transformations of permanent grasslands into agricultural land **a requirement has been introduced of maintaining a percentage of permanent grasslands in the whole country**, which cannot be de-

[6] This percentage, upon presentation by the European Commission of the report assessing implementation of this practice after 2017, may be increased up to 7%.

creased by more than 5%, as compared with the reference year 2015. This is the same mechanism as the currently operating under the principle of cross-compliance. In the case of reducing the permanent grassland ratio by more than 5% nationwide, it will be necessary to implement corrective actions, consisting of obligating the farmers, who have transformed permanent grasslands to restore them, or establish the same area of permanent grasslands elsewhere. At the same time in the Natura 2000 areas it is not allowed to plough or transform environmentally valuable permanent grasslands, i.e. naturally valuable permanent grasslands. Each farmer in possession of naturally valuable permanent grasslands, has been individually informed of this fact in the information chart attached to the initially filled out application for payment in 2015.

Agri-environmental programme covered by the Programme of Rural Development for 2007-2013 (RDP 2007-2013)

2014 was the last year when the agri-environmental programme could be implemented under RDP 2007-2013. As part of the campaign of 2014, the above mentioned action received a total of 115 840 applications, for the amount of 1561 million PLN, including:

- 14228 new applications for the amount of 122.4 million PLN (applications beginning agri-environmental obligations),
- 101 612 continuation applications for the amount of 1438.6 million PLN.

Applications under the agri-environmental programmme RDP 2007-2013 were submitted under 9 packages: package 1. Sustainable Agriculture, package 2. Organic Farming, package 3. Extensive Permanent Grasslands, package 4. Protection of endangered species of birds and of natural habitats beyond the Natura 2000 areas, package 5. Protection of endangered species of birds and natural habitats in the Natura 2000 areas, package 6. The preservation of endangered genetic resources of plants in agriculture, package 7. The preservation of endangered genetic resources of animals in agriculture, package 8. Protection of soils and waters, and package 9. Buffer zones. By the end of 2014 under the agri-environmental programme RDP 2007-2013, support covered ca. 133.9 thousand farms realizing the programme on the area of ca. 2.8 million ha. In addition, by the end of 2014, support covered ca. 63.6 thousand animals.

The budget of the agri-environmental programme RDP 2007-2013, amounted to 2303 million Euro.

Agri-enviro-climatic action and the action: Organic Farming covered by the Programme of Rural Development for 2014-2020 (RDP 2014-2020)

In 2014, conditions and requirements have been prepared for the agri-enviro-climatic action and the action: Organic Farming RDP 2014-2020. The RDP 2014-2020 project has been submitted to the European Commission in April 2014. After the conclusion of the negotiations stage, RDP 2014-2020 has been approved by the European Commission on 12 December 2014.National implementation regulations have been prepared in the 1st quarter of 2015, and from 15 March 2015, application collection has commenced for the aforementioned actions under packages mentioned below.

Agri-enviro-climatic action

The essence of the action is the promotion of practices contributing to sustainable land management, protection of environmentally valuable natural habitats of endangered bird species, landscape diversity, and the protection of endangered genetic resources of cultivated plants and farm animals.

Suboperation 1 – payments under agri-enviro-climatic obligations:

Package 1. Sustainable Agriculture;

Package 2. Protection of soils and waters;

Package 3. Preservation of orchards and traditional varieties of fruit trees;
Package 4. Valuable habitats and endangered species of birds in the Natura 2000 areas;
Package 5. Valuable habitats beyond the Natura 2000 areas.

Suboperation 2 – Support for the protection and sustainable use and development of genetic resources in agriculture:
Package 6. The preservation of endangered genetic resources of plants in agriculture;
Package 7. The preservation of endangered genetic resources of animals in agriculture.

Under packages 1., 2., 4[7]., 5. and 6. payment is granted in the amount of:
- 100% of the basic rate – for areas from 0.10 ha to 50 ha;
- 75% of the basic rate – for areas above 50 ha to 100 ha;
- 60% of the basic rate – for areas larger than 100 ha.

Payment rates under agri-enviro-climatic packages

Package 1. Sustainable Agriculture – 400 PLN/ha;

Package 2. Protection of soils and waters:
- 650 PLN/ha – applies to intercrops;
- 450 PLN/ha – applies to protective strips on slopes with an inclination of more than 20%.

Package 3. Preservation of orchards and traditional varieties of fruit trees -1 964 PLN/ha;

Package 4. Valuable habitats and endangered species of birds in the Natura 2000 areas:
Payment rate depends upon *extensive use in the SPA*: 600 PLN/ha, *the presence of bird species* i.e.: the black-tailed godwit (as well as the common snipe, common redshank, lapwing): 890 PLN/ha, the Aquatic Warbler: 1199 PLN/ha, great snipe (as well as Eurasian curlew): 1070 PLN/ha, corncrake: 642 PLN/ha, and the *type of habitat*: Molinia meadows: 1276 PLN/ha, alluvial mountain meadows and halophytes: 1043 PLN/ha, grasslands: 1300 PLN/ha, semi-natural damp meadows: 911 PLN/ha, semi-natural fresh meadows: 1083 PLN/ha, peat bogs: 600 PLN/ha (mandatory requirements), or 1206 PLN/ha (mandatory and supplementary requirements).

Package 5. Valuable habitats beyond the Natura 2000 areas:
Payment rate shall depend on the *type of habitat*: Molinia meadows: 1276 PLN/ha, alluvial mountain meadows and halophytes: 1043 PLN/ha, grasslands: 1300 PLN/ha, semi-natural damp meadows: 911 PLN/ha, semi-natural fresh meadows: 1083 PLN/ha, peat bogs: 600 PLN/ha (mandatory requirements), or 1206 PLN/ha (mandatory and supplementary requirements).

Package 6. The preservation of endangered genetic resources of plants in agriculture:
- 750 PLN/ha – in the case of cultivations,
- 1000 PLN/ha – in the case of seed/seeding material production.

Payment shall be granted to the maximum surface of 5 ha for individual species/varieties of cultivated plants.

Package 7. The preservation of endangered genetic resources of animals in agriculture:
cattle – 1600 PLN/head, horses – 1500 PLN/head, sheep – 360 PLN/head, swine – 1140 PLN/head, goats – 580 PLN/head.
Payment shall be granted to the maximum number of animals in one herd i.e.:
- cows: 100 heads;
- sows of the same race: 70 sows of the basic herd of the Puławska race, 100 sows of the basic herd of the Złotnicka White race, and 100 sows of the basic herd of the Złotnicka Pstra race.

The beneficiary may be: a farmer, a group of farmers and other land administrators, and in the case of package 4. and 5. additionally other land administrators.

The budget for the agri-enviro-climatic action has been defined in the amount of 1 184 million Euro.

[7] In the case of implementation of Package 4. Valuable habitats and endangered species of birds in the Natura 2000 areas within National Parks no degressivity thresholds are applied.

Action – Organic Farming

Suboperation 1 – Payment in the conversion period to organic farming

Package 1. Agricultural cultivations in the conversion period;
Package 2. Vegetable cultivations in the conversion period;
Package 3. Herbal cultivations in the conversion period;
Package 4. Orchard cultivations in the conversion period;
Package 5. Fodder cultivations on arable grounds in the conversion period;
Package 6. Permanent grasslands in the conversion period.

Suboperation 2 – Payment for maintaining organic farming

Package 7. Agricultural cultivations after the conversion period;
Package 8. Vegetable cultivations after the conversion period;
Package 9. Herbal cultivations after the conversion period;
Package 10. Orchard cultivations after the conversion period;
Package 11. Fodder cultivations on arable lands after the conversion period;
Package 12. Permanent grasslands after the conversion period.

Within both subactions, ecological payment shall be granted in the amount of:

- 100% of the basic rate – for areas from 0.10 ha to 50 ha;
- 75% of the basic rate – for areas above 50 ha to 100 ha;
- 60% of the basic rate – for areas larger than 100 ha.

Payment rates in the conversion period (switching to organic farming), amount to: Package 1. – 966 PLN/ha, Package 2. – 1557 PLN/ha, Package 3. – 1325 PLN/ha, Package 4. – 1882 PLN/ha (basic orchard cultivations), and 790 PLN/ha (extensive orchard cultivations), Package 5. – 787 PLN/ha, and Package 6. – 428 PLN/ha, and the payment rates for maintaining organic farming amount to: Package 7. – 792 PLN/ha, Package 8. – 1310 PLN/ha, Package 9. – 1325 PLN/ha, Package 10. – 1501 PLN/ha (basic orchard cultivations), and 660 PLN/ha (extensive orchard cultivations), package 11. – 559 PLN/ha, package 12. – 428 PLN/ha.

The beneficiary may be: a farmer and groups of farmers, who meet the definition of a professionally active farmer. The budget for the action organic farming amounts to 700 million Euro.

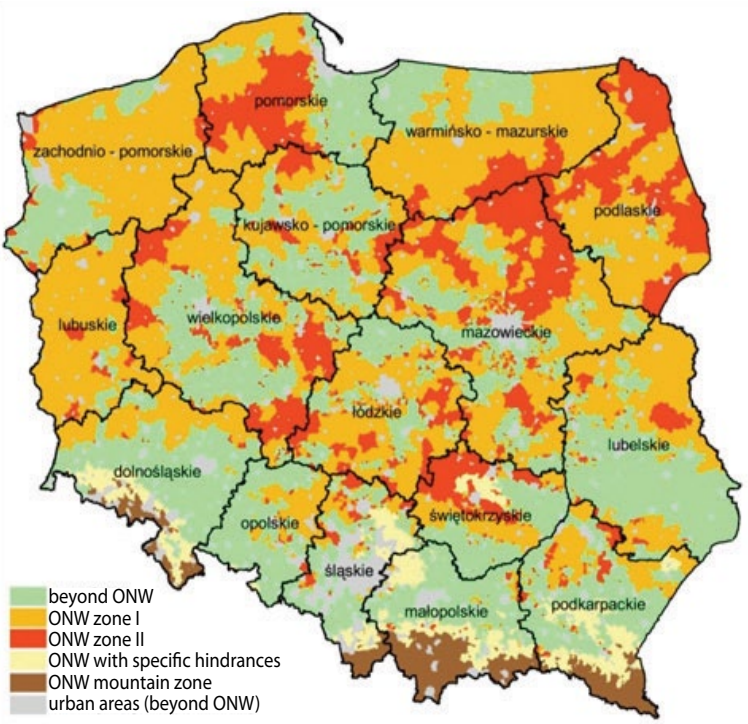
LFA Payments

Action – Support for farming in mountainous areas and other areas with unfavourable farming conditions implemented in Poland since 2004. Its aim is to ensure agricultural land use and thus, maintaining the viability of rural areas, i.e. depopulation prevention in those areas, as well as the preservation of landscape qualities in rural areas, and the promotion of environmentally friendly agriculture. In Poland, LFA areas comprise more than 56% of arable lands (map below), among which we can distinguish three types:

- Mountain type LFA;
- Lowland type LFA of zone I and II;
- Specific type LFA.

As part of the campaign of 2014, the above mentioned a total of ca. 738 thousand applications have been submitted for the action, for an area equal to ca. 7.4 million ha of arable land. Application collection has been conducted according to the principles for RDP 2007-2013, with the proviso that farmers submitting applications for granting LFA payments in 2014 were obliged to keep for 5 years agricultural activity in the areas, and only until the end of the calendar year.

Map 2. Areas of different farming conditions (LFA)



Source: MARD.

In 2014, principles have also been prepared for the implementation of the payment actions for areas with natural limitations or other RDP 2014-2020 restrictions, which is *in fact* a continuation of payments granted in 2004-2014. The prevailing payment rates have been kept, except for the mountain type LFA's, where the rate has been increased from 320 PLN to 450 PLN per hectare. National legislation has been prepared, and as of 15 March 2015, application collection has commenced for granting payment.

The budget for the action – Payments for areas with natural limitations, or other particular limitations, realized under RDP 2014-2020 amounts to 2166 million Euro.

Afforestation Payments

The Afforestation Action is implemented since 2004. Under RDP 2007-2013 assistance is granted for afforestation of not only arable lands, but also non-agricultural areas. Afforestation of such areas raises their economic value and favourably affects the natural environment. Directly, afforestation affects emission restrictions of CO_2 (through sequestration processes). In addition, the appropriate manner of setting up forest cultivations, shaping their species composition, and the use of existing self-seeding plants, positively affects maintaining biodiversity, and the condition of established forest cultivations.

By the end of 2014, a total of ca. 35 thousand ha of arable and other lands have been afforested and payments made in the amount of ca. 539 million PLN for approx. 10 thousand beneficiaries. In addition, under the RDP 2004-2006 obligation, transferred to the RDP 2007-2013 budget, payments were realized in the amount of ca. 398 million PLN for ca. 8 thousand beneficiaries, whose afforestation area amounted to ca. 40.2 thousand ha.

In 2014, principles have been prepared for implementing the action – Investments in the development of forest areas and improvement in the forest liveability, realized under RDP for 2014-2020, which is *in fact* a continuation of payments implemented in 2004-2014. National legislation has been prepared, and from 15 June 2015, application collection has begun for granting support for afforestation. The budget for this action amounts to ca. 301 million Euro. The scope of this budget includes also liabilities from RDP 2004-2006 and RDP 2007-2013.
In addition, as of 15 March 2015, continuation application collections were carried out for beneficiaries of the afforestation action under RDP 2004-2006 and RDP 2007-2013.

Rural Development Programme

The effects of implementing the Rural Development Programme for 2007-2013

European aid programmes have in the last 10 years become an impulse for changes in agriculture in rural areas and in fishery. EU aid measures received by Polish rural areas, agriculture and fishery, were addressed for investments, potential construction of the processing industry, job creation, creation of groups of agricultural producers, projects for the protection of the natural environment, infrastructure improvement within districts and the support of local activities. Thanks to the modernization of their farms, Polish farmers can effectively compete on the domestic and EU market with farmers from other states. Poland's integration with the EU brought about a growth in the income of farmers. Also, the economic competitiveness of rural areas has increased, which consists of not only agricultural production, but also tourism, services, trade, craft and small companies. Rural areas, apart from their traditional roles as food producers, gained importance as the space for business operations not related to agriculture. The life quality of the inhabitants of rural areas and small towns has increased. Many kilometers of aqueducts and sewer systems were created, along with hundreds of sewage treatment and waste segregation plants, the centres of many towns were renovated, hundreds of playgrounds created, countless community centres and culture houses were built and renovated. Rural areas are becoming more and more attractive as living space. It is evidenced by almost a quarter million of citizens living in cities, who, over the past 10 years, decided to move into rural areas.
Over the last decade, Poland has also received one of the most advanced food processing industry, and has become one of the largest food producers in Europe. Our country is also a European potentate in fish processing. This success is also due to investments in fishery, processing plants, co-financed by EU funds.
The allocation of EU funds received by Polish rural areas, agriculture and fishery since 2004, as well as the implementation and realization of aid programmes required determination, effort, creativity, and organizational efficiency of farmers, fishermen, food processors and institutions working for the benefit of villages, agriculture and fishery, Which was achieved. Poland was classified among EU countries, as one of the states most effectively using European funds.
Poland has for years been realizing a policy of sustainable development of agriculture and rural areas, according to the principles specified in EU programmes. It consists of the shaping and customization of human living conditions in rural areas to the requirements of modern times, taking into account the need for a multi-directional and sustainable development. It is necessary to emphasize that such a policy of agriculture and rural areas development creates not only new opportunities for socio-economic development for farmers and rural area inhabitants, but also allows for ensuring environmental protection and preservation of the rural landscape beauty.
The previous Polish experience during the implementation of the aid schemes of the European Union in agriculture and in rural areas demonstrated that it is crucial for detailed and reliable information on the projects being implemented to reach the widest possible group of potential aid recipients. Gathering experience during implementation of schemes, as well as presenting good practices in this regard in publications is intended to, first of all, allow the EU aid recipients to apply experiences of other beneficiaries to optimisation of their own activities.

Since 2007, Poland implements the Rural Development Programme for the years 2007-2013 (RDP 2007-2013), which enables continuation of the process of modernisation and development of agriculture, food economy, as well as sustainable and multifunctional development of rural areas. This programme is a continuation of the EU aid for rural areas and agriculture, which took place under the pre-accession SAPARD programme, the Sectoral Operating Programme Restructuring and Modernisation of the Food Sector and Development of Rural Areas for 2004-2006 and the Rural Areas Development Plan for the years 2004-2006.

The RDP 2007-2013 is conducted by means of 22 measures, grouped in thematic axes:

Axis I – Improving the competitiveness of the agricultural and forestry sectors;
Axis II – Improvement of the environment and countryside;
Axis III – Improving the quality of life in rural areas and encouraging diversification;
Axis IV – Leader approach.

The legal basis for implementation of the RDP 2007-2013 is the Act of 7 March 2007 *on support for rural development with participation of the European Agricultural Fund for Rural Development within the framework of the Rural Areas Development Programme for 2007-2013* (Journal of Laws Dz.U. of 2013, item 173, and of 2015, item 349), as well as executive regulations of the Minister of Agriculture and Rural Development, respectively for each of the performed activities.

Altogether, more than **17.2 billion EURO** was planned for implementation of the RDP 2007-2013. Poland, as one of the first EU countries, prepared and agreed with the European Commission the Rural Development Programme for the years 2007-2013. The programme was adopted by the European Commission by virtue of the Decision of 7 September 2007. The total amount allocated for the Programme increased in 2010 by nearly 170 million EURO. In the case of Poland, these measures are allocated for implementation of projects within the scope of restructuring of milk production, water management and biodiversity. High interest on the part of applicants convinced the Minister of Agriculture and Rural Development to apply for relocation of funds between measures so as to increase the budgets of the measures that are the most popular among farmers and rural inhabitants.

Implementation of the programme is monitored on a current basis. Until 29 May 2015, under implementation of the RDP 2007-2013, beneficiaries already submitted nearly 7.25 million applications in total. More than 6.58 million contracts/decisions were concluded/issued for an amount equal to 102.12% of the total amount allocated for the Programme. Completed payments already reached nearly **65.4 billion PLN.** This puts Poland among the European Union countries implementing the Programme the fastest.

Axis I of the RDP 2007-2013 **Improving the competitiveness of the agricultural and forestry sectors**, also called the economic axis, includes 11 measures. One of the main goals of this axis is fostering the appropriate structural transformations by providing aid for young farmers, as well as a source of income for persons at a pre-retirement age, abandoning agricultural activity. Due to a low degree of specialisation of agricultural holdings, underinvestment in the infrastructure of agricultural production, as well as fragmentation of the area structure, which is reflected in lower production effectiveness, Axis I measures also provide appropriate support instruments for covering the costs of adapting agricultural holdings to the growing community requirements (including requirements related to environmental protection), as well as to more intense competitive pressure on the part of manufacturers from other EU member states and third countries. For this purpose, actions have been launched, supporting the process of farms restructuring, strengthening their tangible capital, and supporting innovation.

The support instruments under Axis I also addressed further improvement in competitiveness of the food industry, in particular with regard to micro- and small-sized enterprises, as well as support for creation of added value of the basic agricultural production. Furthermore, improvement in competitiveness of the agricultural sector is implemented by ensuring support with regard to improvement in the quality of production and creation of groups associating agricultural manufacturers.

Important Axis I measures also include supporting improvement in the education level and qualifications, among others by means of: vocational trainings, information and training activities, as well as enabling the use of advisory services.

Under Axis I, beneficiaries submitted more than 293 000 applications, which fully exhausts the limit of funds allocated for this axis. More than 213 000 contracts were concluded for the amount of nearly **32.9 billion PLN**. More than 29.1 billion PLN was paid out.

Axis I of the RDP 2007-2013 includes 11 measures, the implementation of which fosters structural transformations in agriculture and raises competitiveness of Polish agricultural producers and processors. Material effects of the implemented Programme are impressive. Under the three investment actions of Axis I (*Setting-up of young farmers, Modernisation of agricultural holdings, Restoring agricultural production potential destroyed by natural disasters and introduction of prevention actions),* the farmers, according to the material statement produced at the end of 2014, purchased more than 277 000 machines and devices for the animal and plant production, as well as 214 000 additional equipment elements, over 46 000 agricultural tractors. They built and modernised more than 4.0 million m^2 of farm buildings. In order to facilitate taking over or establishing of agricultural holdings by young people holding required professional qualifications, nearly 31 000 young farmers received aid for the amount of nearly 2.4 billion PLN. 1068 entities of the agricultural and food sector already received financial aid in the amount of nearly 2.7 billion PLN for implementation of projects upgrading processing plants and improving the quality of wholesale markets. Nearly 6300 farms damaged as a result of natural disasters received aid for restoration of production (including livestock and perennial crops). Operations approved for implementation will allow for covering a total of 91.2 thousand ha of arable and forest lands with reparcelling activities. Flood protection covered the area of 129 thousand ha of arable lands and, and 430 km of river beds and their river basins were adjusted. 219 km of flood dykes were built. Nearly 209 000 participants took part in vocational trainings for farmers and persons employed in forestry, including almost 144 000 men and more than 65 000 women. In total, more than 142 000 advisory services were provided.

Axis II of the RDP 2007-2013 **Improvement of the environment and the countryside** includes 4 measures, i.e.: Agri-environmental programme; Support of management in mountain areas and in less-favoured areas (LFA); Afforestation of agricultural and non-agricultural land, as well as Restoring forestry production potential damaged by natural disasters and introducing appropriate prevention instruments.

The measure Agri-environmental programme (Agri-environmental payments) contributes to sustainable development of rural areas and preservation of biodiversity in these areas. The main assumption of the programme is to promote agricultural production based on methods compliant with the requirements of environmental protection.

On the other hand, LFA payments support management of areas, where agricultural production is hindered, due to unfavourable natural conditions.

These measures are supplemented by the so-called forest measures. Support for afforesting of agricultural and non-agricultural land is intended to expand forest areas, as well as preserve and reinforce ecological stability of forest areas by reducing fragmentation of forest complexes. In turn, assistance granted as part of the measure "Restoring..." supports forests that were destroyed by biotic and abiotic factors and introduces mechanisms for preventing natural disasters and fire protection devices in particular.

Axis II Improvement of the environment and the countryside is an axis with the greatest number of beneficiaries. In total, nearly 6.3 million contracts/decisions were concluded within this axis, for the amount of nearly 21 billion PLN, of which over 20.6 billion PLN was paid.

Agri-environmental payments covered a total physical surface amounting to more than 2.8 million ha of arable land (according to the state at the end of 2014). Over 907 000 agricultural holdings in the LFA areas received financial support in the amount exceeding 9.85 billion PLN. The support within the afforestation measure covered (along with obligations from 2004-2006) more than 75.42 thousand ha (according to the state at the end of 2014). More than 45.2 thousand ha of forests that were damaged by natural disasters were restored and preventive actions were conducted, related to counteracting fire hazard in forests on the area of over 368.6 thousand ha.

Axis III of the RDP 2007-2013 **Quality of life in rural areas and diversification of rural economy** includes 4 measures. All measures within this axis support sustainable development of rural areas. Support for diversification of

business activities, creation of non-agricultural income sources, creation of jobs in the countryside, development of technical infrastructure, preservation of cultural heritage and fulfillment of social needs of rural area inhabitants allows for improving the quality of life in rural areas and mitigating the effects of unemployment. The measures within this axis change the Polish countryside. They stimulate business activities and counteract depopulation of rural areas. They activate countryside inhabitants and create a stronger sense of attachment to their place of residence and region. They also inspire to preserve and protect local traditions and cultural heritage.

Under the Axis III measures, beneficiaries submitted over 90 000 applications, which fully exhausts the limit of funds allocated for this axis. Nearly 43 600 contracts were concluded, for the amount of almost 15.1 billion PLN. Nearly 12 billion PLN was already paid out.

Thanks to the actions implemented under Axis III, nearly 14 400 farmers and their family members undertook non-agricultural activities, mainly in services. More than 10 500 jobs were created as a result of undertaking economic operations. Furthermore, microenterpreneurs created nearly 19 800 new workplaces. Under the aid for technical infrastructure, 18 700 km of water supply and sewerage network was built, nearly 43 000 pcs. of farm drains were manufactured, 485 sewage treatment plants were built, a system for collection, segregation and disposal of municipal waste was created, which enables management of more than 252 thousand tons of waste, as well as the capability was created to generate nearly 152 MW of energy from renewable sources.

On the other hand, as part of village renovation, the following were built, modernised or equipped: almost 4000 community centres, cultural centres, recreational and sports buildings, over 2400 sports facilities, playgrounds and leisure places, 198 km of bicycle paths and tourist trails, 950 small architecture structures, 391 green areas, parks and other places of rest; the following were modernised: 555 historic buildings of sacral architecture and cemeteries, 91 buildings entered in the register of monuments or included in the regional record of monuments, 20 facilities characteristic for the given region, adapted for public purposes, 22 historical monuments and places of commemoration; the following were utilised: 99 reservoirs and watercourses. 1714 village centres were developed.

Axis IV of the RDP 2007-2013 **Leader** includes 3 measures. The primary purpose of Axis 4 Leader is to activate rural inhabitants by building social capacity in the countryside, increasing the possibilities of acquiring and using funds, as well as improving the management of local resources and their valorisation. Axis IV Leader affects the shaping of positive attitudes of people living in the countryside. The experiences with the implementation of the Leader approach demonstrate that this axis is intended particularly for the inhabitants of rural areas, who want to consciously and methodically influence the development of their place of residence and shape the spatial and architectonic development of their countryside, according to their visions and needs.

As part of implementation of the measures of Axis IV Leader, beneficiaries submitted nearly 78 500 applications. More than 41 800 contracts were concluded, for the amount of over 3.4 billion PLN. More than 2.8 billion PLN was already paid out.

As part of small projects, 4897 cultural, recreational or sports events were organised.

Thanks to other operations completed as part of small projects, among others:

- the following were built, restored or rebuilt:
  - ✓ 3861 facilities of small tourist and recreational infrastructure;
- the following were renovated or restored:
  - ✓ 1160 rural community centres and other facilities serving the same functions,
  - ✓ 518 facilities entered in the register of monuments or subject to record of monuments;
- 522 jobs were created.

As part of actions completed under the measure *Village renewal and development*, among others:

- the following were built, modernised or equipped:
  - ✓ 2931 000 buildings performing recreational, sports and socio-cultural functions, including community centres and cultural centres,
  - ✓ 2488 sports facilities, playgrounds, leisure zones,

  - ✓ 511 km of bicycle paths and tourist trails,
  - ✓ 894 small architecture structures,
  - ✓ 224 green areas, parks and other places of rest;
- the following were modernised:
  - ✓ 243 external facades and roofs in buildings of sacral architecture entered in the register of monuments or covered by the regional records of monuments, and cemeteries entered in the register of monuments,
  - ✓ 78 buildings entered in the register of monuments or included in the regional record of monuments, used for public purposes;
- 1270 areas fostering establishment of social relations were developed.

In addition, within the Axis Leader, 1339 farmers, farmers' spouses and other household members undertook business activities, while microenterpreneurs created 426 jobs.

Material data have been shown according to the state at the end of 2014. Full results of the programme implementation will be visible after its settlement in 2016.

The Rural Development Programme for the years 2014-2020

The Rural Development Programme for the years 2014-2020 has been adopted by the European Commission on 12 December 2014.

The budget of the Rural Development Programme for 2014-2020 amounts to more than 13.5 billion EURO (8.6 billion EURO from the EU budget and 4.9 billion EURO from the national budget). Within the Programme, 15 measures will be implemented, covering 35 submeasures.

The RDP 2014-2020 is one of the instruments for implementation of *the Sustainable Development Strategy for the Countryside, Agriculture and Fishery for the period of 2012-2020* and, at the same time, is one of the implementation tools for the EU *Europe 2020 Strategy for smart, sustainable and inclusive growth*. As one of the programmes covered by the Partnership Agreement, formulated under the EU legal regulations, the RDP 2014-2020 determines the strategy and principles of making use of EU measures of the European Agricultural Fund for Rural Development (EAFRD) for the development of Polish agriculture and rural areas.

The main goal of the RDP 2014-2020 is to improve competitiveness of agriculture, achieve sustainable natural resources management and apply measures related to climate, as well as achieve sustainable territorial development of rural areas.

The programme will implement 6 priorities of the EU in the scope of development of rural areas, specified in Article 5 of the Regulation of the European Parliament and the European Council (EU) No. 1305/2013 of 17 December 2013 on support for rural development by the European Agricultural Fund for Rural Development (EAFRD). Various actions will be performed within particular priorities.

Priority 1. Fostering knowledge transfer and innovation in agriculture, forestry and rural areas will be implemented through the following measures:

- Knowledge transfer and innovative activities,
- Advisory services,
- Cooperation.

Priority 2. Enhancing farm viability and competitiveness of all types of agriculture and improving the economic performance of agricultural holdings will be implemented through the following measures:

- Modernisation of agricultural holdings,
- Restructuration of small holdings,
- Development of agricultural services,
- Payment for farmers transferring small holdings,
- Premiums for young farmers.

Priority 3. Promoting food chain organisation, including marketing of risk management in agriculture will be implemented through the following measures:

- Processing and marketing of agricultural products,
- Quality systems of agricultural products,
- Manufacturers groups,
- Basic services... markets,
- Restoring agricultural potential destroyed as a result of natural disasters.

Priority 4. Restoring, preserving and enhancing ecosystems related to agriculture and forestry will be implemented through the following measures:

- Agri-environment climate measures,
- Organic farming,
- Payment for areas facing natural or other specific constraints,
- Land reparcelling.

Priority 5. Promoting resource efficiency and supporting the shift towards low carbon and climate resilient economy in the following sectors: agriculture, food and forestry sectors will be implemented through the following measures**:**

- Investment in the development of forests and improvement in forest vitality.

Priority 6. Promoting social inclusion, poverty reduction and economic development in rural areas will be implemented through the following measures:

- Premiums for development of non-agricultural entrepreneurship,
- Basic services in rural areas and village renewal,
- Leader.

Under the new RDP 2014-2020, the financial aid instruments planned in Priority 2 of the RDP 2014-2020 will be particularly important for improving management efficiency and competitiveness of agricultural holdings. They are intended, first of all, to support further development of agricultural holdings *(Modernisation of agricultural holdings, Restructuration of small holdings, Premiums for young farmers, Payments for farmers transferring small agricultural holdings*). Within the measure *Modernisation of agricultural holdings*, investment aid for agricultural holdings will be continued. As a result of the intervention, the holdings will achieve sustainable profitability. The intervention will be focused above all on agricultural holdings requiring structural changes, conducting operations related to animal production, including piglets rearing, production of milk and beef. This measure will have the highest budget allocated among all measures and submeasures of the RDP 2014-2020. Setting-up of young farmers will be continued – aid in the form of premiums in the amount of 100 000 PLN.

New important instruments, contributing to structural changes in the agricultural sector will include: *Premium for restructuring small agricultural holdings* and *payments for farmers transferring small agricultural holdings.*

Aid instruments planned under Priority 1 will also contribute to further development of the agricultural sector and growth in its competitiveness: *Knowledge transfer and information activity*, as well as *Advisory services, farm management and farm relief services*. The measure *Cooperation* will constitute a new tool fostering implementation of innovations in the agricultural and food sector. Within the measure *Knowledge transfer and information activity*, it is planned to conduct vocational trainings for farmers, forest holders, as well as demonstration projects, activities spreading innovative solutions concerning agricultural and forest production, as well as agricultural and food processing. The measure *Advisory services, farm management and farm relief services* covers advisory services for farmers, as well as conducting activities with regard to vocational trainings for advisors. The measure *Cooperation* will foster implementation of common projects introducing innovative solutions within products, processes, organisation, technology, marketing into agricultural and agri-food industry. Support within this action will also include creation and functioning of European Innovation Partnerships (EIPs), which will include, first of all, farmers, entrepreneurs, scientific-research units, in order to jointly prepare and implement projects within the aforementioned subjects.

Support instruments planned under Priority 3 will play an important role in improving the food chain organisation. This priority will foster implementation of investment projects involving processing and marketing of agricultural products and supporting founding of groups and organisations of manufacturers. It will also foster accession and participation in quality systems for agricultural and food products. Furthermore, in order to facilitate direct sales of agricultural products, it is planned to continue supporting construction and modernisation of markets. The RDP 2014-2020 also envisages support enabling restoration of the potential of agricultural production damaged by natural disasters, as well as introduction of a new scope, aimed at protection of agricultural holdings against this type of events.

Within Priority 4 and 5, projects will be implemented, related to environment protection (including water, soils, landscape) and preservation of biodiversity under the Agri-environment climate measure. It was also planned to provide support for organic holdings and aid for afforestation of marginal land. In order to ensure continuity of agricultural use of land and, at the same time, maintain the viability of rural areas, preserve landscape qualities of rural areas and maintain a sustainable method of management, taking account of the environmental protection aspects, support for less-favoured areas will be continued.

Within Priority 6, actions will be continued, related to development of rural areas and improvement in the quality of life in these areas, as well as actions involving diversification of business activities, creation of jobs in the countryside, protection of cultural heritage and development of social infrastructure in rural areas.

This priority, within Leader the measure, is assumed to implement under the Local Development Strategies (LDS) a significantly broader range of measures than in the RDP 2007-2013. LDSs will also foster actions aimed at: social capital reinforcement, entrepreneurship development, income sources diversification, creation and development of local processing incubators, improvement of competences of people from the LDS area, development of local products, development of target markets, preservation of local heritage, development of open-access and non-commercial tourist, leisure or cultural, technical infrastructure, also within the scope of water and sewage management and construction or modernisation of local roads, creation of networks with regard to establishing short delivery chains and local markets, as well as promotional and marketing activities, activation of the unemployed, application of information technologies in the development of non-agricultural jobs, as well as sharing the cultural, natural and tourism resources of rural areas. Execution of the bottom-up initiatives of local communities implemented by the Local Development Strategies will also reinforce competitiveness of agriculture and food economy.

The future beneficiaries of the Rural Development Programme for the years 2014-2020 and all other interested persons may become familiar with the programme by visiting the web site of the Ministry of Agriculture and Rural Development at www.minrol.gov.pl, in the tab RDP 2014-2020, the website of the Agency for Restructuring and Modernisation of Agriculture at www.arimr.gov.pl, in the tab EU Funds.

The webpages also gradually publish the legal regulations and implementation procedures (applications and instructions for filling out the applications) of different activities of the Rural Development Programme for the years 2014-2020.

RURAL AREAS

Rural areas infrastructure

Technical infrastructure is an important factor in the development of rural areas, affecting both the quality of life of the inhabitants, as well as the possibilities of investing in these areas. The fundamental factors in this respect include the collective sewerage network and sewage treatment plants, the condition of the power infrastructure, as well as access to the Internet. Rural areas are characterised by strong spatial diversity in terms of technical infrastructure. The best-developed infrastructure in rural areas is located in the vicinity of municipal areas.

At the end of 2014, Poland had:

- 237 791.21 km of water supply system (in 2008, the network length amounted to 212 844.19 km), and 3768.11 km of this amount was built in 2014 (in 2008, 4054.03 km of the system was built),
- 85 689.26 km of sewerage system, in 2014, 5590.26 km were built (in 2008, 2575.71 km of networks were built).

Table 21. The length of water supply and sewage network by provinces

Item	Province	Water supply system		Sewage network	
		Built in 2014	Total as at 31.12.2014	Built in 2014	Total as at 31.12.2014
		km	km	km	km
	POLAND	**3768.11**	**237 791.21**	**5590.26**	**85 689.26**
1	Dolnośląskie	237.11	11 908.94	360.80	5800.39
2	Kujawsko-pomorskie	358.98	20 602.95	192.66	4661.00
3	Lubelskie	273.65	18 474.53	221.82	3443.97
4	Lubuskie	62.44	5239.71	203.52	2022.77
5	Łódzkie	133.63	18 396.50	165.22	2788.65
6	Małopolskie	446.24	15 536.10	1177.59	9144.91
7	Mazowieckie	593.33	35 076.40	590.28	6810.81
8	Opolskie	82.83	6410.70	253.06	2976.58
9	Podkarpackie	253.99	12 502.47	365.77	12 698.87
10	Podlaskie	219.77	11 391.07	39.24	1603.59
11	Pomorskie	210.83	11 342.08	262.38	6540.23
12	Śląskie	131.15	10 560.25	475.94	5389.26
13	Świętokrzyskie	144.54	11 612.11	411.06	4101.41
14	Warmińsko-mazurskie	263.39	14 101.27	246.08	4699.20
15	Wielkopolskie	227.66	26 202.91	464.45	7914.75
16	Zachodniopomorskie	128.57	8433.22	160.39	5092.87

Source: MARD.

The Mazovian Province has the longest water supply network – 35 076.40 km of the network, while the Lubuskie Province has the shortest one – 5239.71 km of the network. On the other hand, the Podkarpackie Province has the longest sewerage network, amounting to 12 698.87 km, whereas the Podlaskie Province has only 1603.59 km of the network.

Considering different sizes of the provinces in Poland, as well as regional environmental conditions, the length of water supply and sewage systems does not allow for clearly specifying the extent, to which the existing infrastructure satisfies the needs of the population in rural areas. A clearer picture of the existing situation can definitely be obtained using indicators (degrees) of connections to the water supply systems and the sewage systems in rural areas.

At the end of 2014, the indicator of connections to the water supply systems, calculated as the ratio of the number of residential buildings connected to the water supply system to the number of residential buildings in total, expressed in%, amounted to 81.48%, while the indicator of connections to the sewage systems, expressed as the ratio of the number of residential buildings connected to the sewage system to the number of residential buildings in total, amounted to 32.29%.

Table 22. Indicators of connections to the water supply systems and the sewage systems in rural areas by provinces (as at 31.12.2014)

Item	Province	Number of residential buildings in total	Number of residential buildings connected to the network:		The indicator of connections to the water supply systems	The indicator of connections to the sewage systems
			water supply	sewage		
		pcs.	pcs.	pcs.	%	%
	POLAND	**4 020 448**	**3 276 044**	**1 298 183**	**81.48**	**32.29**
1	Dolnośląskie	202 852	174 905	75 925	86.22	37.43
2	Kujawsko-pomorskie	190 158	175 010	60 736	92.03	31.94
3	Lubelskie	339 947	269 345	56 449	79.23	16.61
4	Lubuskie	85 331	75 914	26 011	88.96	30.48
5	Łódzkie	293 138	266 230	55 897	90.82	19.07
6	Małopolskie	468 280	297 149	146 037	63.46	31.19
7	Mazowieckie	568 495	460 643	134 379	81.03	23.64
8	Opolskie	125 054	117 818	54 800	94.21	43.82
9	Podkarpackie	330 842	218 370	173 378	66.00	52.41
10	Podlaskie	145 919	113 741	26 092	77.95	17.88
11	Pomorskie	173 565	147 676	86 166	85.08	49.64
12	Śląskie	292 782	244 862	107 552	83.63	36.73
13	Świętokrzyskie	204 511	175 726	57 710	85.92	28.22
14	Warmińsko-mazurskie	121 361	103 990	41 333	85.69	34.06
15	Wielkopolskie	369 046	339 477	148 548	91.99	40.25
16	Zachodniopomorskie	109 167	95 188	47 170	87.19	43.21

Source: MARD.

From the data contained in Tab. 22 it can be concluded that in four provinces (Kujawsko-pomorskie, Łódzkie, Opolskie, Wielkopolskie), the indicator of connections to the water supply systems exceeds 90%, while the lowest ratio of connections to the water supply systems (66%) occurs in the Podkarpackie Province. The situation is definitely worse when it comes to access to sewage infrastructure. The highest achieved indicator of connections to the sewage systems amounts to 52.41% (Podkarpackie Province), while in three provinces the indicator of connections to the sewage systems does not exceed 20%, for instance, in the Lubelskie Province it amounts only to 16.61%.
Another indicator illustrating, how well rural areas are equipped with municipal infrastructure is the number of village councils with a water supply and sewage network in relation to the number of village councils in total. On average, 92.90% of village councils in Poland has a water supply network, while approximately 26.32% has a sewage network. However, it should be noted that village councils with partial water supply or sewage network are also reported as village councils with a water supply or sewage network. The data suggest that in thirteen provinces, more than 90% of village councils have a water supply network. The majority of village councils (99.81%) with a water supply network is in the Opolskie Province, while the least amount in the Podkarpackie Province, where the percentage of village councils with a water supply network is 74%. However, the Podkarpackie Province has the highest percentage of village councils with a sewage network (51.29%), against 9.70% of village councils with a sewage network in the Podlaskie Province.
It should be emphasized that the low availability of municipal devices in rural areas is caused by many factors.

Table 23. Village councils with water supply and sewage infrastructure by provinces (as at 31.12.2014)

Item	Province	Number of village councils	Village councils with a collective network		Village councils with a collective network	
			water supply	sewage	water supply	sewage
		pcs.	pcs.	pcs.	%	%
	POLAND	**40 810**	**37 914**	**10 742**	**92.90**	**26.32**
1	Dolnośląskie	2357	2148	776	91.13	32.92
2	Kujawsko-pomorskie	2280	2254	708	98.86	31.05
3	Lubelskie	3703	3252	566	87.82	15.28
4	Lubuskie	1024	939	288	91.70	28.13
5	Łódzkie	3541	3476	544	98.16	15.36
6	Małopolskie	1881	1565	732	83.20	38.92
7	Mazowieckie	7407	6754	1086	91.18	14.66
8	Opolskie	1032	1030	414	99.81	40.12
9	Podkarpackie	1550	1147	795	74.00	51.29
10	Podlaskie	3277	3051	318	93.10	9.70
11	Pomorskie	1639	1570	830	95.79	50.64
12	Śląskie	1067	1025	389	96.06	36.46
13	Świętokrzyskie	2128	2013	541	94.60	25.42
14	Warmińsko-mazurskie	2300	2179	751	94.74	32.65
15	Wielkopolskie	3916	3858	1202	98.52	30.69
16	Zachodniopomorskie	1708	1653	802	96.78	46.96

Source: MARD.

Table 24. Expenditures for individual sewage treatment plants in rural areas in 2014 and the physical effects (as at 31.12.2014),

		Expenditures	The number of individual sewage treatment plants	
Item	Province	Thousands PLN	Put into operation in 2014 pcs.	Total pcs.
	POLAND	**239 431.9**	**22 665**	**149 263**
1	Dolnośląskie	7507.4	890	7177
2	Kujawsko-pomorskie	26 316.9	2639	20 106
3	Lubelskie	15 059.3	1832	19 745
4	Lubuskie	9486.4	827	3031
5	Łódzkie	13 165.7	1763	13 419
6	Małopolskie	16 945.2	1643	9568
7	Mazowieckie	42 738.8	3516	22 303
8	Opolskie	4753.3	396	2710
9	Podkarpackie	2197.6	432	1483
10	Podlaskie	32 327.0	2453	12 059
11	Pomorskie	5474.2	626	3618
12	Śląskie	13 436.6	940	5455
13	Świętokrzyskie	21 140.1	1680	6853
14	Warmińsko-mazurskie	4903.7	526	3564
15	Wielkopolskie	17 285.3	1740	15 070
16	Zachodniopomorskie	6694.4	762	3102

Source: MARD.

Each Polish region should be treated individually, by adapting the water supply and sewage projects to regional conditions. Application of a network infrastructure is not possible everywhere, moreover, it is not always the best solution, both due to technical, as well as economic reasons.

When discussing the sewage infrastructure, collective sewage treatment plants should also be mentioned. At the end of 2014, 2854 sewage treatment plants existed in rural areas, with total flow capacity exceeding 1.94 million m^3/day. This is a result of investments implemented in the recent years. For comparison, in 2008, there were 2649 collective sewage treatment plants.

The data shown in Table 23 demonstrate a considerable disproportion between the access to collective water supply systems and to the sewage system. This state results, among others, from the fact that the development of a water supply system is significantly higher in the hierarchy of needs of the rural population. Furthermore, investments within the scope of sewage systems and sewage treatment plants require greater expenditures and are perceived by part of the local community as an additional financial load, rather than as an element improving the standard of living and limiting degradation of the natural environment.

Application of network devices is not always recommended and possible. In the recent years, growing interest in individual sewage treatment systems may be observed. This situation can be seen both in the rural areas, as well as in the suburbs having no connection to the sewage network.

The highest number of individual rural sewage treatment plants were built in the Mazowieckie Province and in the Kujawsko-pomorskie Province, while the lowest amount in the Opolskie and Podkarpackie Provinces, however, these provinces are characterised by relatively high ratios of connections to the sewage systems.

Individual sewage treatment plants are in many cases, in particular in the case of dispersed buildings, a very good solution and should be promoted and, if possible, subsidised by local authorities. However, it should be noted that for proper functioning of individual sewage treatment systems, it is necessary for the users to follow several rules, among others:

- the use of biopreparations in order to intensify and direct the treatment process;
- temporary emptying of the septic tank and the secondary precipitation tank of all accumulated solid parts, i.e. deposits and scum;
- cleaning the filters;
- flushing the system inside the sewage treatment plants;
- not introducing substances that may disturb biological processes in the settling tank.

Bearing the above in mind, marketing of individual sewage treatment systems should be conducted along with education, ensuring proper functioning of the systems. The capability to make new investments related to water and sewage management is undoubtedly determined by the pool of funds available for this purpose. In the years 2010-2014, 21 billion PLN was spent on investments within the scope of water supply systems and sanitary networks in rural areas (Tab. 25). The highest amount of funds came from EU programmes and own funds of local governments.

Table 25. Investment outlays on water supply systems and sanitary networks in rural areas in the years 2010-2014 (in thousand PLN)

Source of financing	2010	2011	2012	2013	2014
State budget	61 243	73 830	19 173	29 747	32 538
Local government of the commune	1 689 440	2 505 517	1 373 803	1 043 790	1 129 447
Inhabitants	123 799	140 217	142 028	147 845	165 331
European Union	1 998 024	2 082 748	1 330 225	1 078 475	1 136 130
Environmental protection funds	624 625	778 082	651 141	570 671	545 885
Other	256 961	293 868	232 514	240 172	506 451
Total	4 754 094	5 874 266	3 748 887	3 110 702	3 515 781

Source: MARD.

Entrepreneurship in rural areas

Contemporary transformations in rural areas are characterised by an increase in social and economic activity of the inhabitants. The growing number of non-agricultural enterprises is one of the most significant trends. Support for micro, small and medium enterprises in the countryside after Poland's accession to the European Union created conditions for the development and economic diversification of rural areas. Agricultural holdings also change, by introducing new forms of economic activities, mainly within the scope of services and trade. The importance of non-agricultural operations in their income increases.

An increasing trend can be observed in the number of enterprises in rural areas. In 2014, over 4 million national business entities were entered into the national register REGON, and more than a million of them (26.8%) had their business registered in rural areas (tab. 26).

In 2014, more than 97% of national business entities conducting business activities in rural areas belonged to the private sector. The remaining 3% constituted entities of the public sector. In the structure of the private sector, according to legal forms in rural areas, natural persons conducting business activity accounted for the highest percentage in 2014 (82.7%). The next largest groups included companies (6.3%), as well as associations and social

Table 26. National business entities registered in the REGON register

Specification	Year	Total
POLAND	2004	3 576 830
	2009	3 742 673
	2014	**4 119 671**
	Dynamics (2004 = 100)	115.17
Municipal areas	2004	2 747 560
	2009	2 807 600
	2014	**3 012 134**
	Dynamics (2004 = 100)	109.63
Rural areas	2004	829 270
	2009	935 073
	2014	**1 107 515**
	Dynamics (2004 = 100)	133.55

Source: own study on the basis of the Local Data Bank of the Central Statistical Office (GUS).

organisations (3.7%). According to the criterion of the number of employed persons, the majority of national business entities in rural areas constituted natural persons employing up to 9 people.

The structure of business entities in rural areas is still dominated by the diverse nature of operations. At the end of 2014, ca 4.9% of entities operated in the sectors of agriculture, hunting, forestry and fishery. Ca. 28.4% operated in the sectors of industry and construction, while the most numerous group comprised of other areas of activity (66.7%). The dominating one was wholesale and retail sale (i.e. sales that do not require processing) of all kinds of goods, as well as provision of services related to sale of goods and repair of automotive vehicles and motorcycles.

The data of the National Agricultural Census (2010) show that 54 700 of agricultural holdings conducted business operations other than agricultural, directly related to the holding. They constituted 2.9% of all the holdings conducting agricultural activities. As compared to 2007, the number of the concerned holdings decreased by more than a half. Nevertheless, some of them abandoned agricultural activities and took up non-agricultural activities.

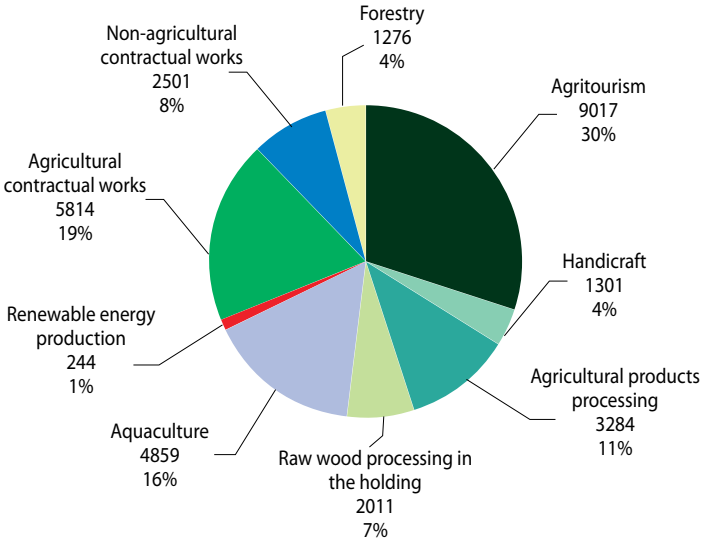
Table 27. The structure of national business entities registered in the REGON database by type of conducted operations in 2014

Specification	Total	Including:		
		agriculture, hunting, forestry and fishery	industry and construction	other activities
POLAND	4 119 671	75 601	878 383	3 165 687
Municipal areas	3 012 134	20 803	564 484	2 426 847
Rural areas	1 107 515	54 798	313 898	738 819
	100	4.9	28.4	66.7

Source: prepared by the author on the basis of data obtained from the Local Data Bank of the Central Statistical Office (GUS).

Non-agricultural operations directly related to the holding were conducted by 3.2% of holdings producing mainly for the market, and 2.3% – mainly for the needs of the household (including only 1.7% – only for own needs). Holdings producing mainly for own needs conducted operations within the following scope more often than entities producing mainly for the market: agritourism, handicraft, processing of agricultural products, processing of raw timber at the holding, and agricultural contract works. Among holdings producing mainly for sale, aquaculture, production of renewable energy and other activities were more popular (e.g. running a store selling agricultural products manufactured on a farm). The structure of non-agricultural operations is presented in Figure 25.

Figure 25. The structure of non-agricultural operations conducted on agricultural holdings



Source: Own study on the basis of Characteristics of agricultural holdings in 2010, a series presenting the results of the National Agricultural Census 2010, Central Statistical Office (GUS), Warsaw 2012.

In the scope of the policy for development of rural areas, numerous actions are undertaken, focused on entrepreneurship development, for instance, in terms of improving qualifications, facilitating access to the labour market, and the capacity to provide financial aid.

In the new financial perspective, it is planned to support measures within entrepreneurship development on rural areas, non-agricultural jobs and business environment institutions, under operational programmes financed not only from the funds of the Common Agricultural Policy, but also under the Cohesion Policy.

Rural tourism and agritourism

Among different kinds of non-agricultural activities undertaken by the inhabitants of rural areas, tourist services are the most popular. Rural tourism, including agritourism, contributes to improvement in the quality of life and economic diversification of rural areas. It is particularly important for individual agricultural farms. It fosters comprehensive growth in demand in tourist localities, sustains folklore, forces investment-making. It is a form of activity, which contributes to the development of entrepreneurship, competitiveness, as well as to economic stimulation of rural areas. As a consequence, it allows for stimulating activation of communities and cooperation, using values associated with the specific social, cultural and environmental character of the countryside.

Agritourist operations in Poland are conducted by more than 8000 agricultural holdings, having 84.5 thousand accommodation places. The most commonly visited regions are the Carpathian Mountains and the Masurian Lake District. Almost 40% of the operating agritourist farms in Poland are located in the following provinces: Małopolskie, Podkarpackie and Warmińsko-mazurskie. The lowest amount of agritourist apartments is in the Łódzkie, Opolskie and Lubuskie Provinces. However, such facilities can be found across the whole country, including areas that are not typical tourist regions.

Table 28. Agritourist apartments by provinces in 2014, according to the Tourist Facilities Register kept by commune offices

Province	Agritourist apartments	Accommodation
Dolnośląskie	616	7137
Kujawsko-pomorskie	234	2836
Lubelskie	456	3936
Lubuskie	108	1143
Łódzkie	165	1719
Małopolskie	1327	16 072
Mazowieckie	364	3610
Opolskie	119	1211
Podkarpackie	985	8516
Podlaskie	625	5803
Pomorskie	672	7595
Śląskie	404	5172
Świętokrzyskie	313	2855
Warmińsko-mazurskie	801	7696
Wielkopolskie	438	4952
Zachodniopomorskie	389	4329
TOTAL	**8016**	**84 582**

Source: data of the Central Statistical Office (GUS) as at 31 December 2014.

In 2014, 612 500 tourists used accommodations in guestrooms and agritourist apartments, 7% of which were foreign tourists, mainly from Germany and the UK. Guest rooms and agritourist apartments are, to a large extent, seasonal facilities, therefore the majority of tourists visited them during summer months (July and August). Polish agritourist farms offer mainly (in 70-80%) accommodation in single guest rooms (apartments), to a much smaller degree in separate apartments and houses, as well as campsites. On average, one agritourist facility has 5 rooms with 10 accommodation places (5 double rooms).

Poland has a national quality assessment system of rural accommodation base, guaranteeing compliance of the offered services with the declared level, which is conducted by the Polish Federation of Rural Tourism "Hospitable Farms". Detailed information on 250 categorised agritourist apartments can be found on the website:

http://www.agroturystyka.pl/

Sale of products of rural tourism and agritourism is conducted by individual contractors and with the assistance of various institutions, i.e.: local and regional tourist organisations, local action groups (LAGs), as well as agricultural advisory services. The offer of rural tourism can be also found on the website:

http://www.polska.travel/odpoczywajnawsi/

Beyond the Internet, numerous printed information and promotional materials are available in regional and local tourist information centres, as well as disseminated at numerous fairs and outdoor events. The most important promotional event is the International Fairs of Rural Tourism and Agritourism AGROTRAVEL, organised in Poland since 2009. It is a specialised event, constituting an opportunity to promote offers and attractions of rural tourism.

Agricultural consulting performs a particular role in the development of tourism in rural areas. The activities of advisory centres consist, first of all, in training, current consulting, as well as publishing promotional materials and participating in information exchange. The Agricultural Advisory Centre in Cracow runs the National Network of Educational Farms, which disseminates the idea of education in agricultural holdings and promotes activities of educational farms.

The educational offers of schools under the Minister of Agriculture and Rural Development suggest education in the profession of a rural tourism technician. Education in this profession can proceed at the level of vocational secondary school or post-secondary school. According to the data of the Educational Information System, in the present academic year, 11 agricultural schools under the Minister of Agriculture and Rural Development provide education for 394 students in the aforementioned profession. The majority of students receive education in ZSCKR in Różaniec (66 persons) and in ZSCKR in Studzieniec (61 persons), at the level of post-secondary school.

Women in rural areas

The Polish countryside is inhabited by 7.5 million women (the cities by 12.2 million women), including 4.4 million women in working age. In rural areas, women constitute 50.2% of the whole population, with addition that an insignificant surplus of men over women occurs in the group of people of up to 55 years of age, while above this line the number of women is substantially higher than the number of men. As compared to cities, rural areas in Poland are characterised by lower feminisation ratio – one hundred and one woman per one hundred men. In cities, this parameter amounts to 111.2, while on a scale of the whole country – 107.1. According to the research, professionally active women constitute 56.5% of all women living in the countryside. Pursuing the occupation of a farmer, a woman is usually a man's partner in working in the holding or in conducting non-agricultural business operations. Working in the household and rearing children still remains the women's responsibility. However, statistical data show that every fifth holding in Poland is managed by a woman.

The role of women in agriculture results from the specific functions performed by a farming family, which is at the same time a consumer community, and a production team, as well as from the special relation between households and an agricultural workshop. A characteristic feature of women in agriculture is the diversity of the roles performed by them, both family roles, as well as professional ones. The professional roles often include combining work in the holding with an additional professional work or with conducting non-agricultural operations, as well as work for the own environment. In order for women to stay in agriculture, it is important to have an appropriate social security system for farmers. Poland has implemented such a social security system for farmers, in which the spouse of a farmer is defined in the same way as the farmer, unless the husband does not work in an agricultural holding or in a household directly related to the given agricultural holding. This type of systemic approach enables gaining a proper security in case of inability to work as a result of disease or old age by women, who work exclusively in a household related to a given agricultural holding.

Since 1990s, the activity of women in public operations has been increasing. The percentage of women among councillors of rural communes increased from 9.2% in 1990 to 25.4% in 2010 (in the same period, it increased in municipal communes from 16.5% to 26.6%). A growing trend in activation of women is recorded at the level of village councils. Approximately 30% of village administrators are women. Women in Polish rural areas actively participate in transforming their own environment. Social and civil participation of women is very diverse. It includes formal membership in various organisations, as well as informal activity. The Rural Housewives Associations remain the main women's organisation in rural areas, but the number of women increases in associations and foundations acting for the benefit of local communities, as well as in local agricultural government. The diversity of roles performed by women in rural areas gives them particular predispositions to significantly contribute to the progress and innovation, as well as to increase the quality of life in rural areas.

Women in rural areas exhibit higher educational aspirations, are highly committed to activities for the local environment, and the hindrances on the local job market motivate them more often than men to look for employment beyond agriculture or to establish their own companies. The above characteristics predispose rural women to acquire the role of a catalyst for social, cultural and economic changes in rural areas. Examples of entrepreneurship conducted by women are manifold: handicrafting, crafting, agritourism, processing and sale of agricultural products. Such work is particularly attractive to them, as it allows them to combine the professional responsibilities with work at home and upbringing children. Combining work in agriculture with non-agricultural activities allows for running less profitable holdings and prevents depopulation of certain regions, and hence their economic and social degradation.

AGRICULTURAL INSTITUTIONS

Agricultural Market Agency

The Agricultural Market Agency (AMA) has been supporting the agricultural and food sector for 25 years. It was established in 1990 to pursue actions intended to ensure balance between demand for agricultural products and their supply. During this period, the scope of operations of the Agency has been changing. After Poland's accession to the European Union, it was extended, and along with the evolution of the EU agricultural policy, it has been subject to further changes. The Agricultural Market Agency, as an accredited paying agency, belongs to the institutions implementing the Common Agricultural Policy (CAP), and its activities relate, first of all, to functioning of agricultural markets.

The year 2014 marked the beginning of implementation of the Common Agricultural Policy, according to new and reformed principles adopted for 2014-2020. Under the Rural Areas Development Programme for the years 2014-2020[8], Agency became an entity implementing two measures: "Quality systems for agricultural and food products" and "Cooperation"[9]. With regard to statutory tasks, the Agency has also been entrusted with tasks related to the implementation of the Operational Programme Food Aid 2014-2020 (OP FA)[10], financed from the Fund for European Aid to the Most Deprived (FEAD)[11], which is an instrument of the EU Cohesion Policy.

The beneficiaries of the AMA measures include agricultural producers and entrepreneurs involved in production, storage or processing of agricultural and food products, as well as organisations associating the aforementioned entities (groups and organisations of producers, associations, co-operatives, and trade organisations). The aid is also addressed to consumers (including children and teenagers) via educational institutions and charities.

Since Poland's accession to the EU until the end of 2014:

- AMA paid 11.8 billion PLN for the beneficiaries operating in the agri-food sector,
- under execution of the food aid programme, the poorest people were provided with roughly 1 million tons of food products worth 2.4 billion PLN (in 2004-2013, in the scope of implementation of CAP financed from EAGF), as well as 37 million PLN (in 2014, under OP FA financed from FEAD)[12],
- 290.4 million PLN was paid out from funds for promotion of agricultural and food products[13].

In 2014, AMA paid the beneficiaries 470.2 million PLN, including 190.1 million PLN under prefinancing of CAP mechanisms, and 280.1 million PLN for implementation of mechanisms financed and co-financed from the national budget. In addition, 55.6 million PLN was paid out from funds for promotion of agricultural and food products. Apart from activities resulting in payments, the Agency administers a number of non-financial mechanisms: production quota system, foreign trade mechanisms, as well as mechanisms of monitoring and control of production and processing (in 2014, on the following markets: wine, sugar, milk and dairy products, tobacco, fruit, vegetables and in the scope of renewable energy sources).

Since Poland's accession to the EU until the end of 2014, 633 100 entrepreneurs were registered in the Central Register of Entrepreneurs (CRP). In the recent years, AMA issued on average ca. 300 000 administrative decisions per year.

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[8] Pursuant to the Act of 20 February 2015 on support for rural development with the participation of the European Agricultural Fund for Rural Development in the framework of the Rural Areas Development Programme for 2014-2020 (Journal of Laws Dz. U. of 2015, item 349).

[9] The Measure "Cooperation" applies to creation and operation of operational groups for innovations (EIP), as well as implementation by these groups of projects consisting in development of solutions with regard to new products, practices, processes and technologies, as well as methods related to organisation of marketing in the following sectors: rolnym, spożywczym, leśnym..

[10] According to the Act of 12 March 2004 on Social Aid (Journal of Laws Dz.U. of 2015, item 163).

[11] According to the Regulation of the European Parliament and of the Council (EU) No. 223/2014 of 11 March 2014 on the Fund for European Aid to the Most Deprived (Official Journal of The EU, L 72/1).

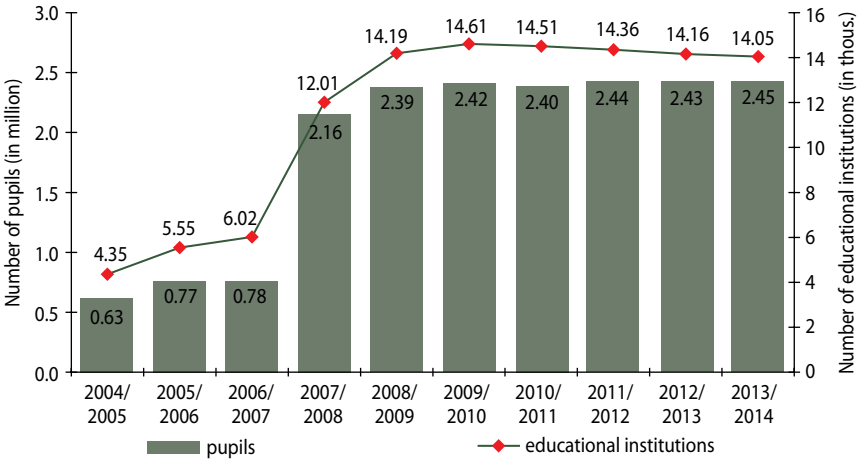
[12] Payments were made in 2015.

[13] Since May 2004 to 30 June 2009, AMA operated the Dairy Promotion Fund, and since July 2009, it has been operating nine funds for promotion of agri-food products.

Promoting consumption

For eleven years, the Agricultural Market Agency has been administering the **"School Milk Scheme"**, aimed at increasing consumption of milk and milk products in educational institutions, as well as shaping a proper consumption model among children and teenagers. As part of the mechanism, schools receive: milk (plain, flavoured, with different content of fat), yoghurts (natural, flavoured, with fruit), curd cheese, cottage cheese, cream cheese, cheese (flavoured and non-flavoured).

Figure 26. Educational institutions and students in the "School Milk Scheme"



Source: data from AMA.

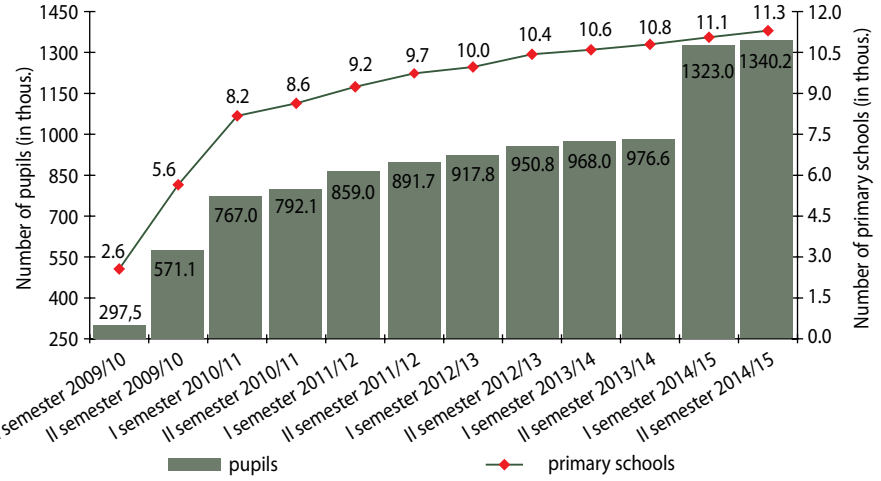
In the academic year 2013/2014, 2.45 million children and students benefited from the "School Milk Scheme" in Poland. They accounted for 42% of all children attending educational institutions covered by the scheme in Poland. Children and students covered by the scheme attended 14 050 educational institutions. In the academic year 2014/2015, 2.54 million children and students from 14 000 educational institutions benefited from the scheme[14].

Since Poland's accession to the EU until the end of 2014, children and students consumed under the "School Milk Scheme" ca. 445 thousand tons of milk and milk products (which corresponds to ca. 2.2 billion "glasses of milk"), and AMA paid for the scheme's implementation 1 148.5 million PLN, including 798.9 million PLN from the state budget, 321.6 million PLN from the EU budget, as well as 28.3 million PLN from the Milk Promotion Fund.

In the academic year 2014/2015, AMA continued administering the EU **"School Fruit and Vegetables Scheme"** (Fig. 27), consisting in provision of fruit, vegetables and juices to children in educational institutions free of charge. The main goal of the scheme is long-term change of dietary habits among children by increasing the proportion of fruit and vegetables in their daily diet, as well as promotion of healthy eating habits by educational programmes implemented in primary schools. In the academic year 2014/2015, apart from students from classes 1-3 of primary schools, the scheme covered also children, who are obliged to attend an annual pre-school preparation („zerówki").

[14] Inconclusive data.

Figure 27. Students and primary schools covered by the "School Fruit and Vegetables Scheme"[15]



Source: data from AMA.

The assortment of provided fruit and vegetables was expanded. The children received, free of charge: fresh fruit (apples, pears, strawberries, blueberries), fresh vegetables (carrot, sweet pepper, radish, kohlrabi, tomatoes), as well as fruit, vegetable or fruit and vegetable juices. In the second semester of the academic year 2014/2015, 11 300 primary schools signed contracts with 111 approved suppliers, and 8 approved schools obtained and handed out fruit and vegetables on their own. 1.34 million children benefited from the scheme, which constituted 96.4% of the target group of students covered by the scheme. Each child received 21 portions of fruit and vegetables.

Since the start-up of the scheme (in the academic year 2009/2010) until 31 December 2014, the Agency paid 234.5 million PLN, including 175.9 million PLN from the EU budget and 58.6 million PLN from the national budget. It provided children from primary schools, free of charge, with nearly 262 million portions of fruit and vegetables.

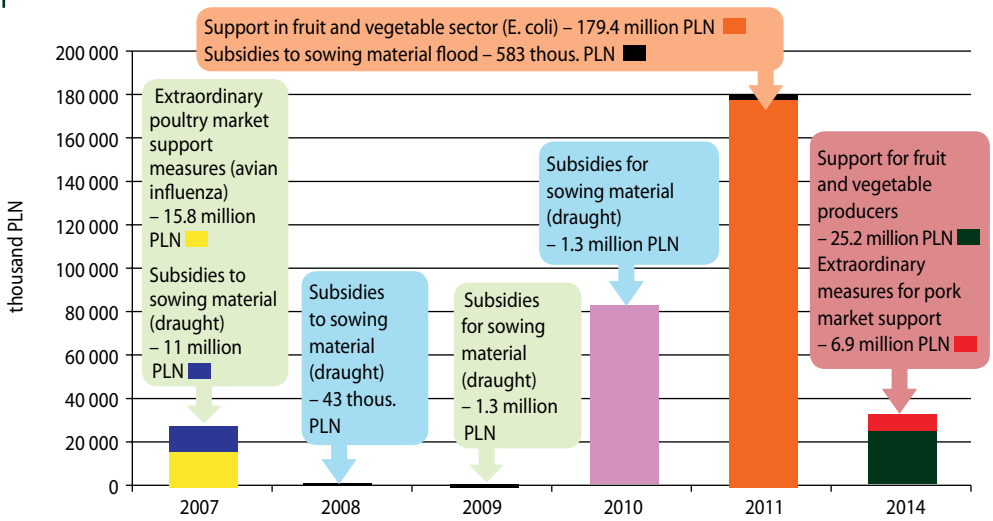
Support for agricultural producers in extraordinary situations

Instability of agricultural markets and recurring emergency situations caused by, among others, anomalies in climate conditions, animal diseases, infections and contamination of products result in inclusion of crisis management elements in the EU agricultural policy, allowing for undertaking quick activities with regard to producer support. AMA has substantial experience in administering this type of activities. In 2007, it provided support for poultry breeders in the amount of 15.8 million PLN in connection with avian influenza, and in 2007-2009 and in 2011, under grants for seeds, it paid farmers suffering from drought and flood 12.9 million PLN. In 2010, the Agency compensated the losses of milk manufacturers incurred as a result of the crisis on this market, paying them PLN 83 million, and in 2011, it paid 179.4 million PLN to vegetable manufacturers, who sustained losses as a result of the crisis caused by bacteria *Escherichia coli* (Fig. 28).

In 2014, as a result of extraordinary situations in agriculture, AMA was highly active in the implementation of mechanisms launched by the European Commission in this respect. As a result of confirmation of the presence

[15] On the basis of contracts signed by educational institutions with approved suppliers providing fruit and vegetables to primary schools. From the 1st semester of the academic year 2010/2011, each subsequent semester also includes primary schools independently obtaining fruit and vegetables and providing them to children, as well as students covered by the curriculum of these schools.

Figure 28. Measures for extraordinary and crisis situations



Source: data from AMA.

of the African swine fever virus in wild boars, AMA supported the pork market. Swine producers from regions covered by restrictions were paid 6.9 million PLN for 49 100 pigs with total classified mass of carcasses amounting to 4.6 thousand tons. In August 2014, the Russian Federation introduced a ban on the import of specified EU agricultural and food products. Therefore, the EU established temporary extraordinary aid for producers of certain fruit and vegetables. In 2014, the Agency paid 25.2 million PLN for 4.7 thousand tons of products intended for free distribution and other goals, as well as for the area of 2.3 thousand ha, where green harvesting/non-harvesting operations were carried out. In view of the continuous ban on the import of EU agri-food products on the territory of Russian Federation, in September and December of 2014, the European Commission launched further temporary aid for fruit and vegetables producers. Payments under this aid were carried out by AMA in 2015.

In total, since Poland's accession to the EU until December 2014, AMA paid out 323.2 million PLN for the benefit of agricultural manufacturers suffering as a result of crisis situations.

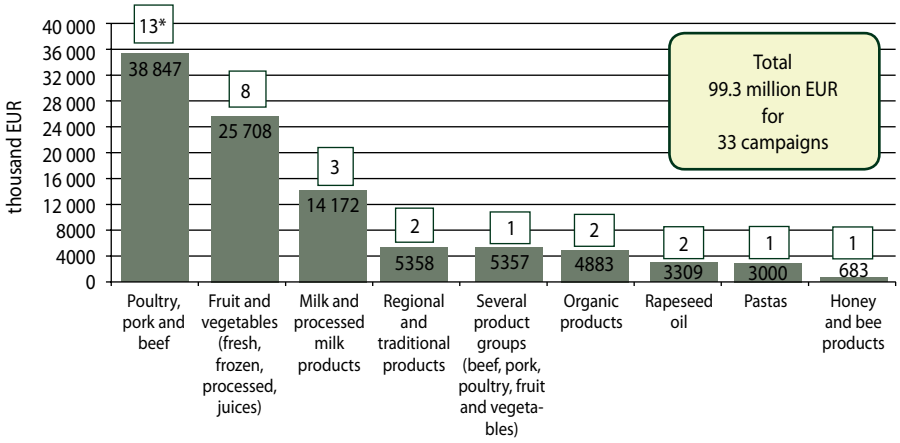
Support for food promotion

Involvement of AMA in actions concerning promotion of agricultural and food products, as well as dissemination of information about these products systematically increases. The Agency supports actions promoting food in several areas. The European Commission granted Poland 99.3 million EURO (since May 2004 to September 2015) for implementation of 33 promotional and/or informational campaigns as part of the mechanism **"Support for promotion and information activities on the markets of selected agricultural products"**, conducted with the use of funds both from the EU budget, as well as from the national budget. The majority of the funds was allocated to campaigns concerning red meat and poultry meat markets, as well as fruit and vegetables market (Fig. 29).

In 2014, AMA granted financial aid or signed contracts[16] for implementation of 13 informational and/or promotional campaigns.

[16] In 2014, AMA signed contracts for implementation of three campaigns: "Quality Guarantee QAFP", "Trade Milk" and "Bicolored Apples from Europe". In the case of the first two campaigns, it also paid out financial aids.

Figure 29. Budgets of Polish trade campaigns



** Number of campaigns.*
Source: data on the basis of the European Commission Decision.

Since Poland's accession to the EU until the end of 2014, AMA disbursed 182.4 million PLN (net) on aid for trade organisations executing information and/or promotional campaigns, including 110.7 million PLN from the EU budget, and 71.7 million PLN from the national budget.

AMA also supported **information and promotion activities under the RDP 2007-2013,** carried out by groups of producers producing high quality products under the EU regional and traditional products certification system (among others, PDI, PGO, TSG) and organic farming, as well as national certification systems – Integrated Plant Production, Quality and Tradition, as well as Quality Meat Program. Since September 2009 to December 2014, AMA signed 32 contracts for conducting the aforementioned activities, for the amount of 17.9 million PLN.

As part of statutory tasks, AMA conducts **promotion and information activities in the scope of development of regional, traditional and organic food sectors, as well as sector of food generated within food quality systems**. In 2014, these activities consisted in, among others, promotion of Polish products outside the borders of Poland (e.g. during international fairs in: Kazakhstan, Algeria, the Netherlands and China), as well as organisation of booths, seminars, workshops and cooking shows, lectures, meetings, trainings, conferences and contests promoting Polish culinary specialties. In the years 2012-2014, AMA executed 1300 projects in this scope and paid out 7.3 million PLN.

AMA participated in the creation of new, strong brands connected with the national agricultural and food sector, which would be recognisable around the world and associated with Poland, as part of the **Sector Promotion Programme for Polish Food Specialties**[17].

Handling of funds for promotion of agricultural and food products

AMA handles nine funds for promotion of agricultural and food products, i.e.: milk, pork meat, beef meat, horse meat, sheep meat, cereal grains and cereal products, fruit and vegetables, poultry meat, and fish. The funds are managed by managing committees appointed separately for each fund, consisting in representatives of food processors, producers and agricultural chambers. AMA provides administrative management of the funds. Since 2009 to 31 December 2014, the accounts of the funds received 236.8 million PLN. 215.1 million PLN was paid out for

[17] As a result of the contract signed with the Ministry of Economy, AMA participated in the implementation of Sub-measure 6.5.1 of the Innovative Economy Operational Program under the system project "Promotion of the Polish Economy on International Markets".

funding activities[18], including 55.6 million PLN in 2014. In 2014, payments to bank accounts of the particular funds were made by ca. 12 thousand business entities.

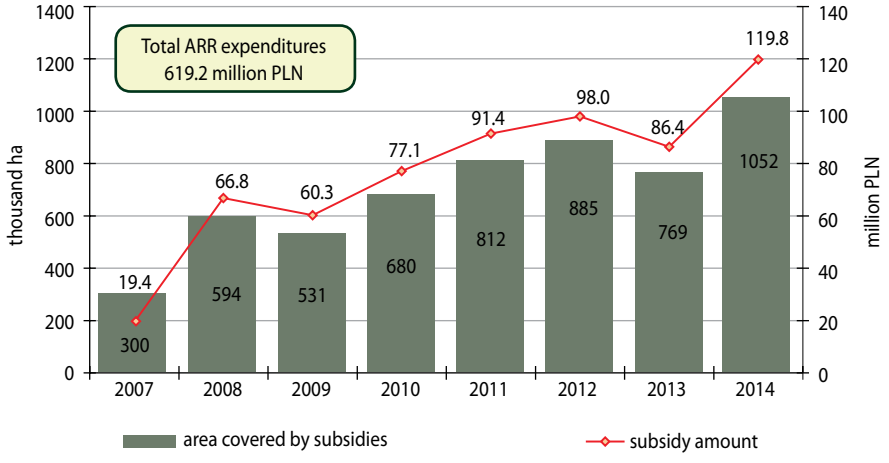
Support of producers and stabilisation of agricultural markets

After Poland's accession to the European Union, AMA purchased as part of interventions over 2.1 million tons of cereals (in 2004-2006 and 2009-2010), 213 thousand tons of sugar (in 2005-2006), 20.5 thousand tons of skimmed milk powder (in 2009), and 6.5 thousand tons of butter (in 2005-2006 and in 2009). In 2015 (until September 15), AMA concluded contracts for purchase at intervention price of 2.24 thousand tons of skimmed milk powder. Total expenses incurred by the Agency for purchase, storage and transport of products amounted to 1.9 billion PLN.

A group of CAP mechanisms of nature similar to intervention purchases are **subsidies for private storage** of agricultural and food products. After Poland's accession to the EU, the mechanism of subsidies for private storage of pork was activated three times (in 2007 – up to 5.9 thousand tons, in 2011 – up to 9 thousand tons, and in 2015 – up to 7.7 thousand tons[19]). By the end of December 2014, AMA paid out under this mechanism 24.2 million PLN. The subsidy mechanism for private storage also covered: 1.1 thousand tons of butter (in total, 350 thousand PLN was spent on this purpose in 2006 and in 2012-2014) and 526 tons of cheese (170 thousand PLN was paid out in 2004-2007). In connection with execution of intervention purchases and subsidies for private storage in the EU member states, AMA also issued certificates to entrepreneurs, who used butter and skimmed milk powder in the CAP mechanisms in other EU states (mostly in the Netherlands, Germany and in the UK). After Poland's accession to the EU, 1600 certificates were issued for 38.3 thousand tons of butter, and 96 certificates for 2.7 tons of skimmed milk powder.

Subsidies for seeds are also used to support agricultural production. They compensate to agricultural producers part of costs of purchase of seed of the elite or qualified category of the following arable plant species: barley, oats (naked, bristle and common), wheat (durum and common), triticale, rye, fava bean, peas (arable varieties), lupin (white, blue and yellow), soy, common vetch, and. The Agency also grants aid to farmers, who use seeds of species

Figure 30. Execution of grants for seeds



Source: data from AMA.

[18] Expenditures from the funds established in accordance with the provisions of the Act of 22 May 2009 on Funds for Promotion of Agricultural and Food Products (Journal of Laws Dz.U. no. 97, item 799, as amendments).

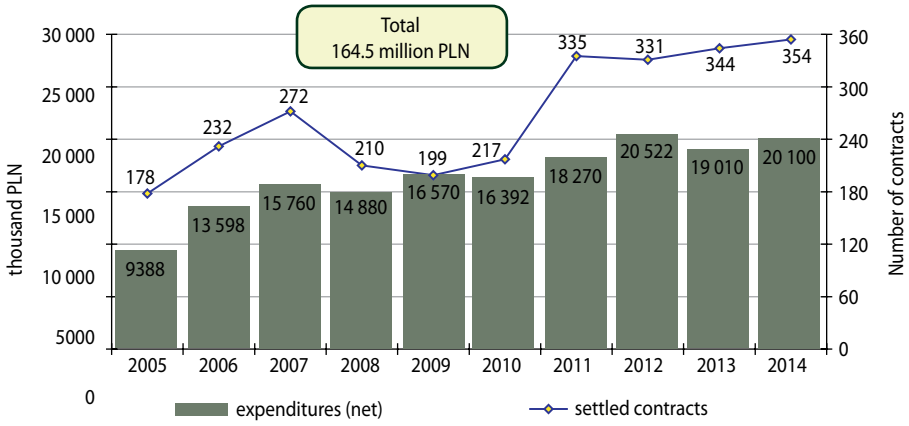
[19] As at the end of August 2015.

or varieties of the aforementioned cereals and/or legumes to cultivate cereal or fodder mixes. Subsidies for seeds are in the form of *de minimis* assistance in agriculture[20]. The number of applications for grants submitted by agricultural producers demonstrated a growing trend – in 2014, it amounted to 78 300 and was 26% higher than in 2013. In 2014, farmers received financial support in the amount of 119.8 million PLN (39% more than in the previous year), for 1 051 700 ha of arable land, on which seed of the elite or qualified category was sown or planted (Fig. 30). The area covered by subsidies increased by 37% as compared with 2013.

Since activation of the subsidy mechanism for seeds in 2007 until the end of 2014, producers of cereals, legumes and potatoes have submitted to AMA 445 100 applications for grants, and the Agency paid for this purpose 619.2 million PLN from the national budget for 5.6 million ha.

The Agency supports the market of bee products by means of refunding the costs incurred by authorised entities (unions, associations, apiarian organisations and co-operatives, groups of producers, research and development entities dealing with issues related to beekeeping) for implementation of the three-year National Apiculture Programmes approved by the European Commission in Poland. The Agency's activities executed under the programmes foster production and sale conditions, as well as the quality of bee products, and hence facilitate the development of the beekeeping sector

Figure 31. Implementation of the AMA activities on the market of apiculture products*



**End of payments – 15th of October each year.*
Source: data from AMA.

Since Poland's accession to the EU until the end of 2014, AMA – as part of implementation of the "Support for beekeeping sector" mechanism – settled 2700 contracts and paid 164.5 million PLN (net), mainly for purchase of varroasis medications and bees. The support also covered technical assistance (purchase of apiculture equipment and trainings), purchase of carriages for transport of beehives, and conduct of physical-chemical analyses of the properties of honey. The disbursed financial means came from the EU budget and from the national budget (50% each).

Quotation of production is an instrument substantially affecting the market in the long run and it is used under CAP. AMA implemented this mechanism with regard to the milk market (until 31 March 2015). On the sugar market, the production limits are binding until 30 September 2017.

[20] Since 1 January 2014, the total amount of de minimis aid in agriculture per one agricultural producer cannot exceed 15 000 EURO within three tax years (the amount was doubled – from 7.5 thousand EURO).

During the eleven years of the functioning of **quotation of milk production** in Poland, the national amount granted to Poland increased by 12% (from 8.96 billion kg in the quota year 2004/2005 up to 10.06 billion kg in the quota year 2014/2015). In this period, the number of wholesale suppliers of milk decreased by 62%, while the number of direct suppliers decreased by 86%[21]. It was reflected in an increase in the average individual amount assigned to a wholesale milk producer(from 24 000 kg at the beginning of the quota year 2004/2005 up to 73 000 kg at the beginning of the quota year 2014/2015).

The average volume of milk deliveries in Poland increased 3 times (from 27 000 kg in the quota year 2004/2005 up to 80 000 kg in the quota year 2014/2015). The national amount granted to Poland in the quota year 2014/2015 was the sixth highest amount of milk production in the EU[22].

Figure 32. The number of milk suppliers (at the end of a given quota year) and the average volume of milk deliveries in Poland

** Inconclusive data.*
Source: data from AMA.

As part of quotation of milk production, AMA carried out activities concerning: distribution of the national reserve of the national amount, handling of transfers and conversion of individual amounts, reduction or withdrawal of individual amounts, control over the volume of milk or dairy products introduced to the market, as well as over the degree of utilisation and settlement of national amounts, monitoring of the number of milk manufacturers in the country, monitoring of fat content in milk, control over the volume of milk introduced to the market in a given quota year, as well as registration of milk purchasing entities.

In order to mitigate the effects of abandoning the milk production quotation system in the EU, the option was created of negotiating prices by **approved organisations of producers and their associations**. Since October 2013, the President of the Agricultural Market Agency has been the authority competent to approve organisations of manufacturers and their associations in the milk sector.

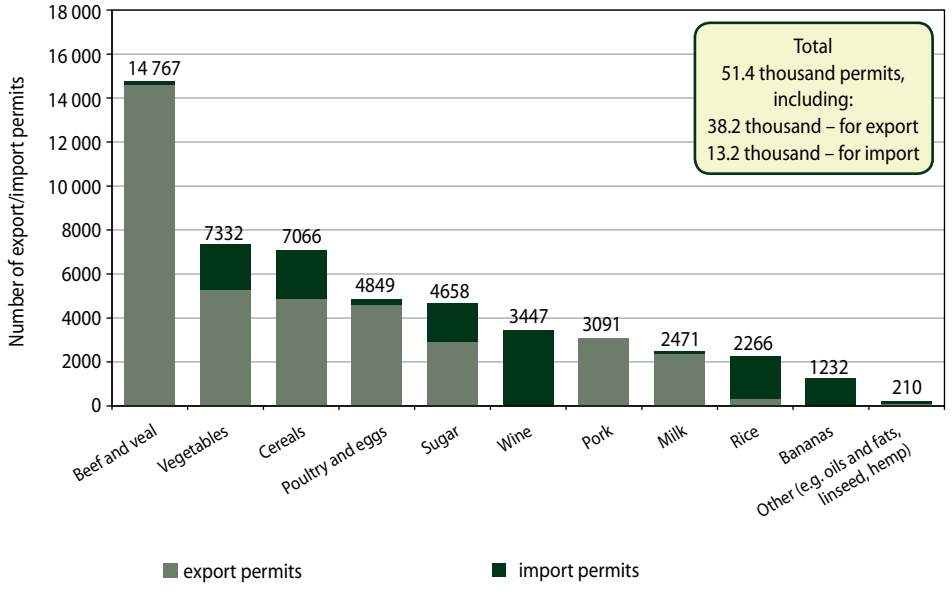
[21] The number of milk suppliers according to the data as at the beginning of a given quota year (i.e. as at April 1st). On the other hand, according to the state at the end of a given quota year (i.e. as at March 31st), the number of wholesale suppliers of milk decreased by 58%, and the number of direct suppliers decreased by 89%.

[22] The following countries had the largest production quotas in the EU: Germany, France, the UK, the Netherlands and Italy.

Administering trade with foreign countries

AMA performs tasks in the scope of trade with agricultural and food products with foreign countries. Since Poland's accession to the European Union until 31 December 2014, it issued a total of 51 400 permits for export/import of agricultural and food products to/from third countries, 74% of which concerned export (Fig. 33). Most permits were issued for the following markets: red meat (17 900), fresh fruit and vegetables (7300), cereals (7100), as well as poultry and eggs (4800). 38 200 of the issued permits concerned export (including 29 600 – export with reimbursement), and 13 200 permits concerned import. Furthermore, with regard to processed Non-annex I products, 1700 P2 certificates were issued[23], 5800 applications for recipes were registered and the validity of 7000 recipes of processed products was prolonged. During the time of application of export refund rates, the exporters of agricultural and food products to third party countries used this type of financial aid. Since Poland's accession to the EU until the end of 2014, AMA paid the beneficiaries 2.1 billion PLN of export refunds, the majority of which for export of sugar (1.2 billion PLN), and then red meat (392.7 million PLN) and dairy products (334.2 million PLN). As part of handling of import of agricultural and food products from third countries, AMA, among others, administered tariff quotas on the following markets: cereals, rice, sugar, fresh fruit and vegetables, milk and dairy products, beef, pork, as well as poultry and eggs. In 2014, it administered 13 kinds of preferential import and 145 import tariff quotas.
AMA also conducts actions facilitating establishment and strengthening of commercial contacts with foreign countries by Polish producers of agricultural and food products (in 2014, among others, an information centre was opened, via which commercial information was provided to Polish entrepreneurs interested in export of articles covered by the Russian embargo). On the AMA website, in the tab "Foreign trade"/"General information", AMA gradually publishes information regarding, e.g., the general principles of intra-community trade, as well as trade with third countries, the principles of authorising agricultural and food products for the market (veterinary and phytosanitary requirements on different markets), as well as the necessary documents related to trade in goods.

Figure 33. The structure of permits issued by AMA in the period of May 2004 – December 2014 on export/import of goods from/to Poland



Source: data from AMA.

[23] P2 certificates were issued for export to the US of noodles labelled with the code CN 1902 11 00 and CN 1902 19.

The Agency distributes information about the possibilities of establishing commercial contacts, using the e-mail address eksporter@arr.gov.pl, from which detailed information are sent out about the conditions of conducting commercial exchange with specific countries, as well as requests for proposals from potential importers. AMA also cooperates with Trade and Investment Promotion Sections of the Embassies and Consulate Generals of the Republic of Poland.

Market organisation and monitoring

AMA performs tasks defined in the EU and national regulations, related to implementation and execution of principles concerning organisation of markets of certain agricultural and food products. AMA's activities in this scope include:

- monitoring the quota and out-of-quota production of sugar and isoglucose, as well as control of the use of out-of-quota production. In 2014, it received production fees (for quota production) from manufacturers of sugar and isoglucose for the marketing year 2013/2014 in the amount of 72.4 million PLN. Furthermore, it paid the producers of sugar and isoglucose interests on overpaid production fees for the marketing year 2004/2005 in the amount of 31.9 million PLN. As part of monitoring of industrial sugar processing (out-of-quota) in the period 2006-2014, AMA verified the correctness of processing of 710.5 thousand tons of out-of-quota sugar delivered for processing. The Agency also controlled **refinement of raw cane-sugar** imported by sugar producers from outside the EU on the basis of permits issued in a given marketing year. Since activation of the subsidy mechanism in 2009, refinement covered 404.4 thousand tons of raw cane-sugar (expressed as white sugar);
- authorisation of the first raw tobacco processors, keeping a register the first processors, authorisation of collection points and confirmation of compliance with the qualitative requirements of the aforementioned raw material. As at 31 December 2014, 14 first processors were authorised, as well as 38 collection points of raw tobacco, and 15 first processors were entered into the register;
- keeping records of entities producing grape wine from grapes originating from grapevine cultivations in Poland. In the marketing year 2014/2015 (as at 31 December 2014), the aforementioned records contained 76 wine producers or non-producing entrepreneurs (55% more than the year before). Vineyards included in the records of the President of AMA occupied the area of 134.4 ha (35% larger than in 2013);
- monitoring of the market for biocomponents and liquid biofuels. In 2014, it the Agency kept 5 registers, i.e.: register of producers (as at 31 December, containing 23 entrepreneurs), register of certifying units (7), register of importing entities (4), register of certification system administrators (1), as well as register of farmers producing liquid biofuels for own use (3 farmers). The producers' reports state that, in 2014, 7 entrepreneurs produced 692 000 tons of methyl esters, and 5 entrepreneurs produced 145.7 thousand tons of bioethanol;
- monitoring of agricultural biogas production. As at 31 December 2014, 58 agricultural biogas plants were registered (16 more than at the end of 2013), belonging to 50 business entities. 2.1 million tons of raw materials was consumed for agricultural biogas production (35% more than in 2013), including mainly: slurry, maize silage, residues of vegetables and fruit, distilling extract, as well as beet pulp. In the process of methane fermentation from the aforementioned quantities of raw materials, power companies generated a total of 173.9 million m^3 of agricultural biogas (55% more than in 2013), from which 354.9 GWh of electric power and 373.7 GWh of heat were generated;
- acquisition and gathering of information (every two years) concerning the existing, under-construction or planned for construction power infrastructure used for generation of biocomponents and electric energy from agricultural biogas. On the basis of information submitted in 2013 by 32 biocomponent producers, as well as 27 agricultural biogas plants, AMA prepared a report, which was transferred to the Minister of Economy. The next report will be prepared in 2015;

- since 2015, monitoring of bioliquid production, as well as keeping of records on agricultural biogas micro-installations.

AMA also facilitated functioning of the agri-food market by sharing knowledge about the current and forecasted situation on the agricultural markets with its participants. The Agency prepares cyclical reports concerning: supply, demand and prices on the basic national and foreign markets, as well as foreign trade of agri-food products. AMA publishes the abovementioned study on the website www.arr.gov.pl (in the section "Analyses and market forecasts"). The Agency's activities are also popularised in the trade and specialist press, via radio and television broadcasts, as well as publications (brochures and the "AMA Information Bulletin"). The Agency disseminates information aimed at preparing the beneficiaries to make the best use of the EU and national funds, offered under mechanisms administered by the AMA.

Food Aid

Under the mechanism of the Common Agricultural Policy **"Distribution of food to the most deprived persons in the European Union"**in the years 2004, the most deprived persons received 297 million litres of UHT milk, 6 million litres of rapeseed oil and 623 thousand tons of other products (including, among others: pastas, wheat flour, groats, white rice, white sugar, ripened rennet cheese, processed cheese, corn flakes, jams, as well as ready dishes) with the total value of 2.4 billion PLN. Four main charities took part in the distribution of food (Polish Food Banks Federation, Caritas Polska, Polish Committee for Social Aid, Polish Red Cross), as well as ca. 8-10 000 local organisations. Since Poland's accession to the EU until the end of 2013, AMA disbursed 1.2 billion PLN on purchase of food products, as well as on covering the costs of transport, administration and storage. Each year, the food aid reaches ca. 3.5 million people in need.

In 2014, AMA, as an intermediary institution, has began to implement **the Operational Programme Food Aid 2014-2020 (OP FA)**. The budget of the programme amounts to 556.9 million EURO, including: 473.4 million EURO from the EU funds (85%), and 83.5 million EURO from national funds (15%). As part of the implementation of OP FA, purchase and distribution of food among the most deprived people are financed, and accompanying actions are implemented, offered to recipients of the food aid. In 2014, the Programme was implemented via national or superregional partner organisations (NPO): Caritas Polska, Polish Red Cross, Polish Committee for Social Aid, and Polish Food Banks Federation, selected by the Ministry of Labor and Social Policy. The warehouses of regional institutions indicated by NPO received 14.6 thousand tons of these products (pork luncheon meat, fusilli pasta, white sugar, UHT milk, and rapeseed oil) worth 37 million PLN. In total, 994 000 most deprived people received nearly 2 million food packages. After the end of distribution of products, at the request of NPOs, AMA also made payments under administrative costs, costs of transport and warehousing in the amount of 1.9 million PLN. The financial measures were transferred in 2015.

* * *

In 2014, AMA became the laureate of the 20th edition of the competition "Polish Quality Award" in the category "Public government organisations". The contest was based on the European Foundation for Quality Management Excellence Model.

More information about the forms of aid and the activities of the Agricultural Market Agency – concerning both the EU, as well as national mechanisms – are available on the website www.arr.gov.pl. We also invite you to visit field branches of AMA, where experts provide information about the support options offered by the Agency. We encourage you to call the Telephone Information Centre – (022) 661 72 72. Questions concerning mechanisms administered by the AMA can also be directed to the e-mail address tpi@arr.gov.pl.

Agency for Restructuring and Modernisation of Agriculture

The Agency for Restructuring and Modernisation of Agriculture (ARMA) has been supporting actions aimed at development of agriculture and rural areas since 1994. When it first began its operation, its aid mainly came from national funds, in the form of contributions to interest rates of investment and capital loans. After Poland's accession to the EU, the scale of the assistance increased, as well as the number of available instruments of support. ARMA's key task then focused on payment of measures under direct payments and EU programmes for development of Polish rural areas. Currently, ARMA is an implementing entity and a paying agency for aid instruments financed from the EU funds stipulated for the years 2007-2013 and 2014-2020:

- EAFRD, which finances all measures concerning rural development under the Rural Development Programme for the years 2007-2013 (RDP 2007-2013) and the Rural Development Programme for the years 2014-2020 (RDP 2014-2020);
- EAGF, which continues implementation of aid instruments under the first pillar of the CAP (direct payments, common organisation of fruit and vegetables market, common organisation of the fisheries market);
- EFF, which finances measures within the Operational Programme "Sustainable Development of the Fisheries Sector and Coastal Fishing Areas for 2007-2013" (OP Fish 2007-2013);
- EMFF, which will involve financing measures under the Operational Programme "Fishery and Sea" (OP Fish 2014-2020).

Furthermore, ARMA is an institution:

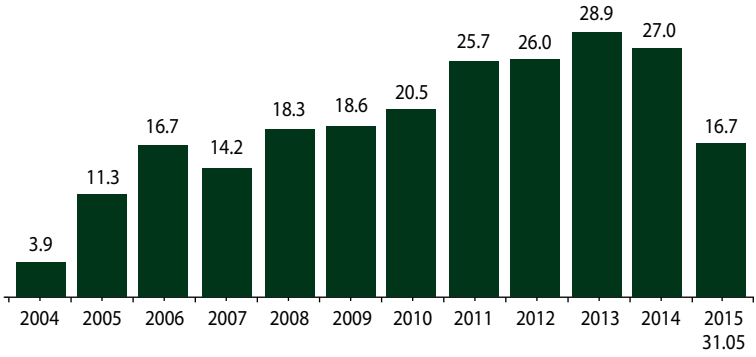
- implementing instruments of national aid (in particular subsidies to preferential loans: investment and disaster);
- keeping register of identified farm animals (a system for the identification and registration of animals);
- keeping and updating the Land Parcel Identification System (LPIS).

The main beneficiaries of ARMA include farmers, agri-food sector entrepreneurs, village inhabitants, groups of agricultural producers, and the fisheries sector representatives. The projects co-financed by the Agency are used by broad social groups, and their results can be seen and measured both in the local, as well as the national economy. From the beginning of its operations to 31 May 2015, the Agency paid the beneficiaries, under the managed aid programmes for agriculture and rural areas, 240.3 billion PLN, 95% of which after Polish' accession to the EU, also under:

- currently implemented programmes:
  - direct aid systems — 118.9 billion PLN (since 2004);
  - RDP 2007-2013 — 65.4 billion PLN (since 2007);
  - RDP 2014-2020 (liabilities) — 1.4 billion PLN (since 2014);
  - OP Fish 2007-2013 — 4.0 billion PLN (since 2007);
  - common market organisation for fruit and vegetables (CMO) — 7.2 billion PLN (since 2004);
  - state aid — 20.4 billion PLN (since 1994);
  - common fishing policy — 2.0 million PLN (since 2004);
- completed programmes:
  - SAPARD programme — 4.5 billion PLN (2002-2006);
  - RDP 2004-2006 — 10.9 billion PLN (2004-2008);
  - SOP "Restructuring… 2004-2006" — 6.6 billion PLN (2004-2009);
  - SOP "Fisheries… 2004-2006" — 1.0 billion PLN (2004-2009).

During the Polish EU membership, the Agency for Restructuring and Modernisation of Agriculture paid the beneficiaries more than 227.8 billion PLN (Fig. 34).

Figure 34. Annual payment of funds by ARMA under programmes co-financed from the EU and state aid in 2004-2015 (as at 31.05.2015), in PLN billion

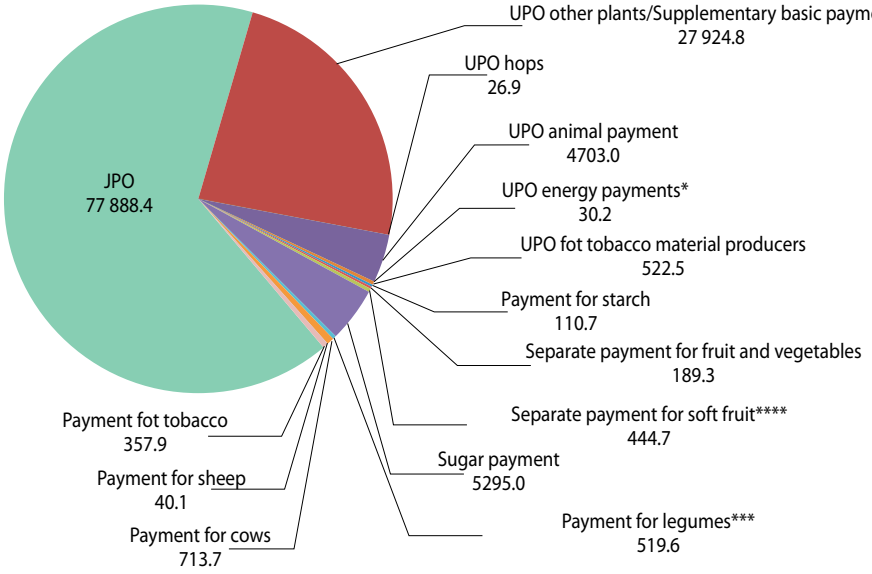


Source: data from ARMA.

Direct aid systems

The most important instrument of the Common Agricultural Policy implemented by ARMA are direct payments, which covered ca. 1.35 million farmers in 2014. Until 31.05.2015, under the Campaign 2014, ARMA paid the beneficiaries ca. 14.1 billion PLN. The structure of the completed direct payments from the beginning of ARMA's operation in Poland is presented in Figure 35.

Figure 35. Structure of direct payments in the Campaigns 2004-2014, in PLN million, (as at 31.05.2015[24])



** Energy payments include subsidies for willow or thornless rose plantations used for energy purposes (in 2005 and 2006, financed from the national budget).*
*** Since the Campaign 2011, Basic supplementary payment.*
*** Since the Campaign 2014, Aid proportional to production volume – environment.*
***** This value includes interim payments and separate payments.*

[24] Furthermore, 150.8 million PLN of funds from the EU were recovered on account of financial discipline.

Table 29. Handling of applications submitted under the RDP 2007-2013 (as at 31.05.2015)

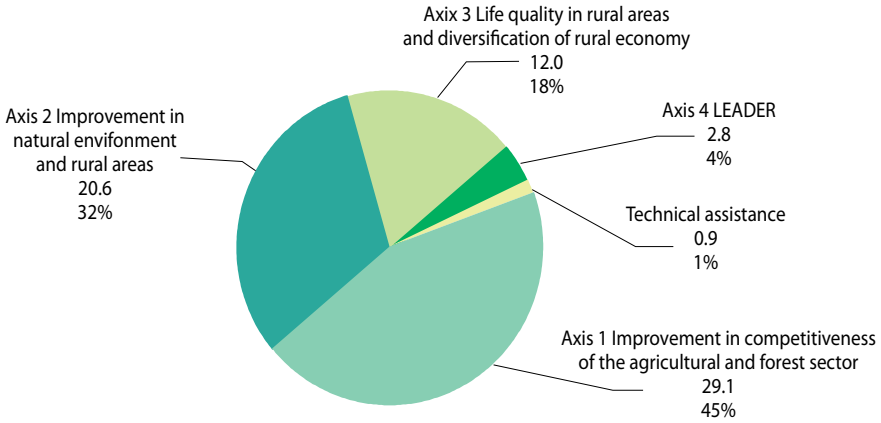
Specification	Number of submitted applications	Number of contracts concluded/ decisions issued	Completed payments in PLN million
Vocational training for persons employed in agriculture and forestry sectors	500	123	96.3
Aiding young farmers in starting up their operations	52 683	34 382	2 375.40
Early retirement	28 534	19 946	10 043.1
Use of advisory services by farmers and forests owners	65 786	47 864	139.5
Modernization of agricultural holdings	96 259	72 241	8 874.3
Increasing the value added of primary agricultural and forest production	3518	1 768	2 694.7
Improvement and development of infrastructure related to agriculture and forestry	919	747	1 295.8
Restoring agricultural production potential, damaged as a result of the occurrence of natural disasters, and introduction of appropriate preventive measures	11 054	7 958	705.9
Farmer participation in food quality systems	32 267	26 752	44.2
Information and promotional actions	91	33	11.1
Support for semi-subsitence farms – liabilities from 2004-2006	-	-	2 130.2
Agricultural producer groups	1434	1 389	701.6
Support for farming in mountain areas and in less-favoured areas (campaigns 2007-2014)	5 922 881	5 453 103	9 852.1
Agri-environmental programme	886 312	812 403	9 363.8
Forestation of agricultural lands and forestation of non-agricultural lands	21 867	15 927	953.4
Restoring the potential of forest production destroyed by disasters, and introducing preventive measures	549	433	451.5
Diversification towards non-agricultural activities	28 999	15 922	1 308.5
Creation and development of micro enterprises	45 454	15 400	2 076.6
Basic services for the economy and rural population	6 578	5 189	6 111.2
Rural revival and development	9 112	7 088	2 457.5
Implementation of local development strategies	76 769	40 388	2 357.5
Implementation of cooperation projects	556	460	32.6
Running the Local Action Group	1 170	993	446.8
Technical assistance	3 900	3 761	878.1
TOTAL	**7 297 192**	**6 584 270**	**65 401.7**

Source: ARMA.

Rural Development Programme for the years 2007-2013

ARMA, as an accredited paying agency, makes payments for all measures of the RDP 2007-2013. Until 31.05.2015, nearly 1.2 million beneficiaries received payments for a total amount of 65.4 billion PLN (Fig. 36), including 13.6 billion PLN under liabilities from previous years.

Figure 36. Amount of payments made under the RDP 2007-2013 with breakdown into axes, in PLN billion and % (as at 31.05.2015)



The Rural Development Programme for the years 2014-2020

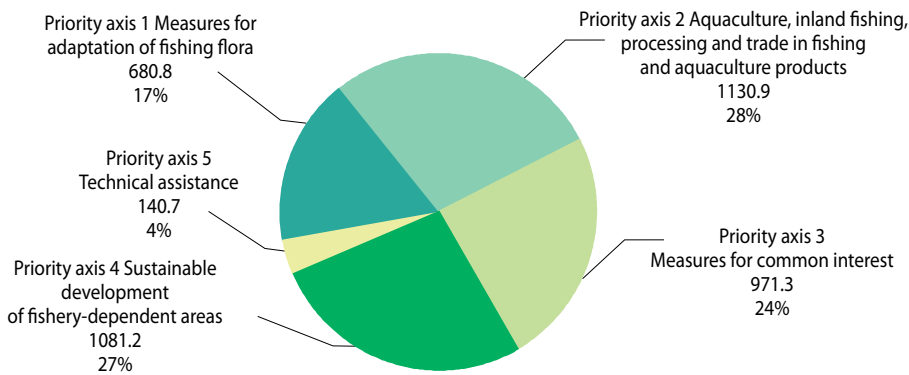
15 measures will be implemented under the Rural Development Programme for the years 2014-2020. Total public funds allocated for implementation of RDP 2014-2020 amount to 13.5 billion EURO (EU and national funds). On 15.03.2015, the first call for applications was opened (Campaign 2015) for 3 measures of the RDP 2014-2020, for which, until 31.05.2015:

- 4053 new applications were approved under the Agri-Environment Climate Scheme;
- 1665 of new applications were approved under the Organic Farming Scheme;
- 560 196 applications were approved under the Payments for Areas of Natural Constraint or Less-Favoured Areas (LFA).

Until 31 May 2015, under the budget of the RDP 2014-2020, 1.4 billion PLN was paid out, including:

- 1.03 billion PLN for the LFA measure under liabilities from 2007-2013;
- 375.6 PLN million for the Early retirement measure, including:
  - 293.6 million PLN under liabilities from 2004-2006,
  - 82.0 million PLN under liabilities from 2007-2013.

Figure 37. Amount of payments made under the OP Fish 2007-2013 with division into axes, in PLN million and % (as at 31.05.2015)



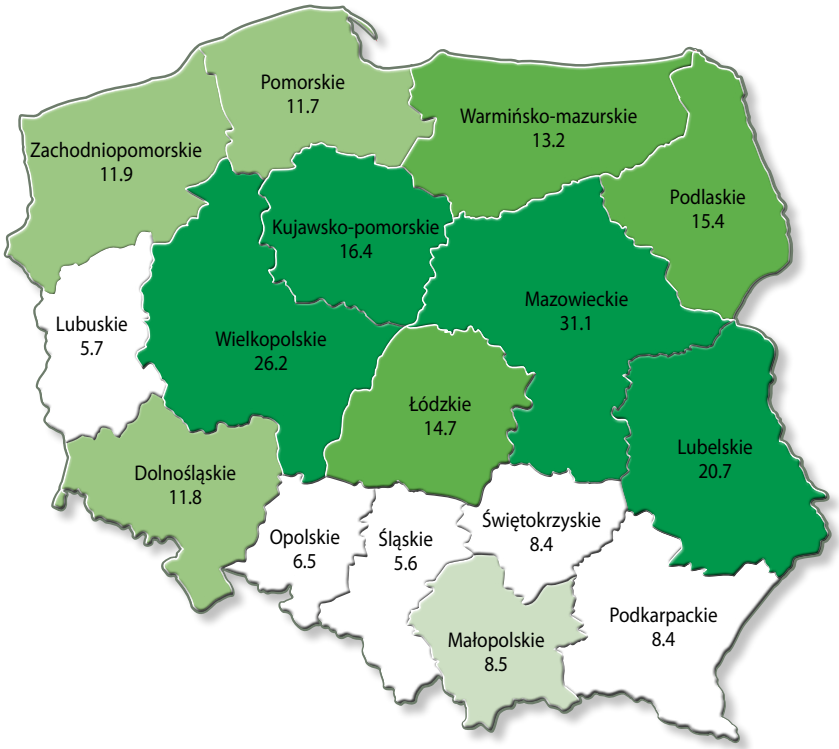
Operational Programme Sustainable Development of the Fisheries Sector and Coastal Fishing Areas 2007-2013

The OP "Sustainable Development of the Fisheries Sector and Coastal Fishing Areas 2007-2013" supports projects leading to stable balance between the marine resources and the fishing capacity of the Polish fishing fleet, as well as creating a modern and competitive fisheries sector in Poland. Until 31.05.2015, ARMA transferred 4.0 billion PLN for representatives of the fisheries sector.

Regional diversity of the granted aid

Under the programmes co-financed from the EU funds (along with the SAPARD Programme), beneficiaries were paid 219.9 billion PLN. The following provinces received the largest support from ARMA: Mazowieckie (31.1 billion PLN), Wielkopolskie (26.2 billion PLN) and Lubelskie (20.7 billion PLN), while the following provinces received the smallest support: Śląskie (5.6 billion PLN), Lubuskie (5.7 billion PLN) and Opolskie (6.5 billion PLN) (Map 3).

Map 3. Aid granted by ARMA under the programmes co-financed from the EU funds (in PLN billion) by provinces (as at 31.05.2015)*

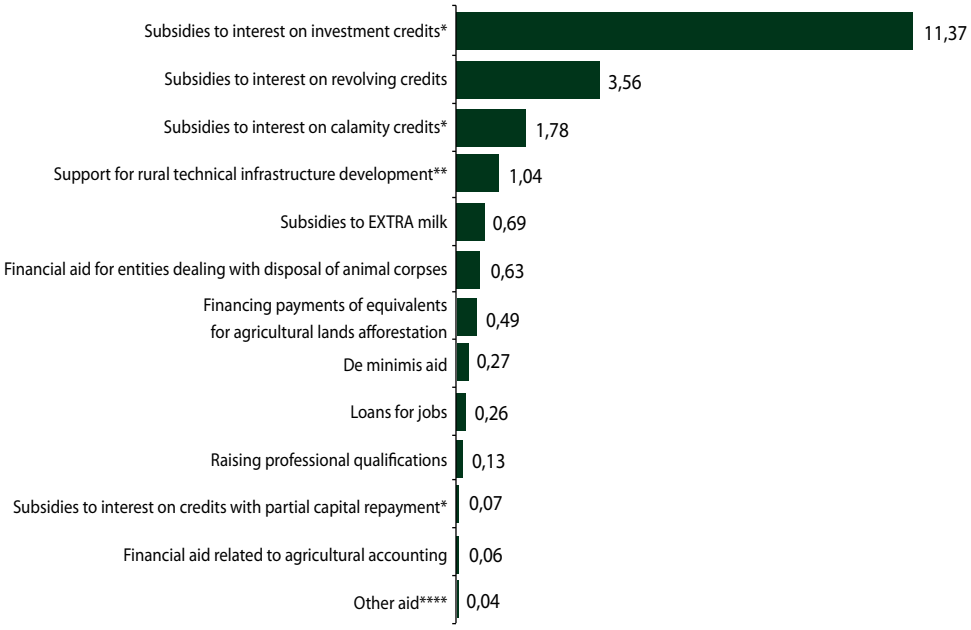


**Without breakdown into provinces – 3.6 billion PLN.*

State aid

State aid is currently granted by ARMA in the form of subsidies to interest on different types of loans, guarantees and securities for repayment preferential investment and disaster loans, sureties for repayment of student loans, subsidies for costs incurred by agricultural producers on disposal of animal carcasses, subsidies for costs incurred on preparation of applications for registration of names and geographic symbols of primary agricul-

Figure 38. The amount of aid granted under the state aid instruments in years, in PLN billion (as at 31.05.2015)



**Data as at 30.04.2015.*
***Aid was provided from the funds of:*
– "ASAL-300" loan granted to the Polish government by the International Bank for Reconstruction and Development,
– a loan from the European Investment Bank (EIB – first tranche of the loan, EIB-BIS – subsequent tranches of the loan),
– The Rural Development Project (RDP), from component "C – Infrastructure", financed from the World Bank loan.
****De minimis aid:*
– support for agricultural producers under damages:
✓ caused by negative effects of wintering in the winter period of 2011/2012,
✓ caused by natural disasters in 2013,
– financial aid in agriculture for a farmer, who in 2014:
✓ was a producer of black currant fruit and cherry fruit,
✓ was a producer of onions, cabbages or apples,
– for a farmer, who, in 2014, suffered damages of agricultural cultivations caused by wild boars (under applications submitted by farmers in 2014 and 2015).
***** Remaining aid: for farmers, who, in 2008 or 2009, received supplementary payments for an area of hop crops, support for founding groups of agricultural producers, for producers of dried fodder, loan sureties and guarantees, as well as registration of names and geographic symbols.*

tural products. From the beginning of its operation, ARMA paid out under this form of support the amount of 20.4 billion PLN.

Animal identification and recording system

The Agency for Restructuring and Modernisation of Agriculture is also an institution responsible for administering an animal identification and recording system in Poland. It is supposed to ensure safety of food in accordance with EU requirements, and thus obtaining complete access to the market for animal-origin products of other EU member states. ARMA keeps the register of identified farm animals, i.e. cattle, sheep, goats and pigs in an IT system. The database of this system contains information on animal owners (producers register), animals and in their whereabouts (register of herd seats), as well as animal movements (registration of notifications on events concerning animals). On the basis of information received from farmers, ARMA updates the animal register with the changes that took place in herds of cattle, swine, sheep, and goats.

Management of the land parcel identification system

ARMA also performs other tasks related to the Polish membership in the EU. They include administration and updating of the Land Parcel Identification System (LPIS), which enables clear identification of the location of an agricultural plot in space, control of a declared area in terms of eligibility (i.e. area entitled to grants with respect to a particular aid scheme), as well as control with regard to overlapping of declarations for particular agricultural plots submitted by one beneficiary.

Agricultural Property Agency

The Agricultural Property Agency is an institution representing the State Treasury with regard to state property in agriculture. For the first half of July 2003, it functioned under the name Agricultural Property Agency of the State Treasury, which was established in October 1991. The real estate taken over by the Agency, mainly liquidated state- owned farms and owned by the State Fund for Land, create the Agricultural Property Stock of the State Treasury (APS). The Agency is self-financing, which means that it does not receive budget resources for its operation. The costs to taking over real estate belonging to State Treasury to include it into the APS, their restructuring, preparation for allocation (e.g. geodetic works, establishing mortgage registers, calls for proposals), protection of historic buildings, maintenance of non-production property, etc., as well as of the Agency's maintenance are fully covered from the income obtained with statutory activity. Furthermore, since 2005, the Agency has been transferring to the state budget an amount resulting from the difference between the income obtained from management of APS properties in the given financial year, and the funds expended for the implementation of statutory tasks. Since 2005 until the end of 2014, the Agency's payments on this account to the state budget amounted to more than 12.8 billion PLN. Furthermore, APA has been obliged to transfer part of the APS real estate sale revenues to the Compensation Fund, which grants compensations to Bug River claimants for property left outside the current borders of the Republic of Poland. From 2006 until the end of 2014, APA transferred to the Compensation Fund over 3.4 billion PLN. In total, payments to the state budget for the Compensation Fund and the restructuring bonds from 2005 to the end of 2014 amounted to 16.2 billion PLN.

Executing statutory provisions and the provisions resulting from other regulations, the Agency pursues objectives with regard to:

1. creating and improving the area structure of family farms;
2. creating conditions favourable for rational use of the production potential of the State Treasury Agricultural Property Stock;
3. restructuring and privatisation of the Treasury property used for agricultural purposes;
4. trade of real estate and other Treasury assets used for agricultural purposes;
5. administering material resources of the State Treasury intended for agricultural purposes;
6. securing Treasury assets;
7. initiating device-agricultural works on the lands belonging to the State Treasury and supporting setting private agricultural farms on the lands belonging to the State Treasury.

The Agency took over and included in the APS 4.7 million ha of land. Apart from land included in the APS, other properties were also taken over (mostly from PPGR), with net carrying value of 8.6 billion PLN, as well as liabilities of the former PPGRs towards approximately 30 000 entities, in the total amount of nearly 2 billion PLN. These obligations were paid in full from the privatisation incomes. The data at the end of 2014 suggest that approximately 1.5 million ha of land remained in the APS.

The material structure of fixed assets taken over by the Agency includes: 337 thousand apartments along with accompanying infrastructure (boiler rooms, hydrophore rooms, sewage treatment plants, etc.), and facilities of agri-processing industry, commercial and service facilities, including, among others: 849 distilleries, 6 wineries and 3 breweries, 269 butcher shops and slaughterhouses, 898 cereal and green forage drying plants, 717 feed mixing

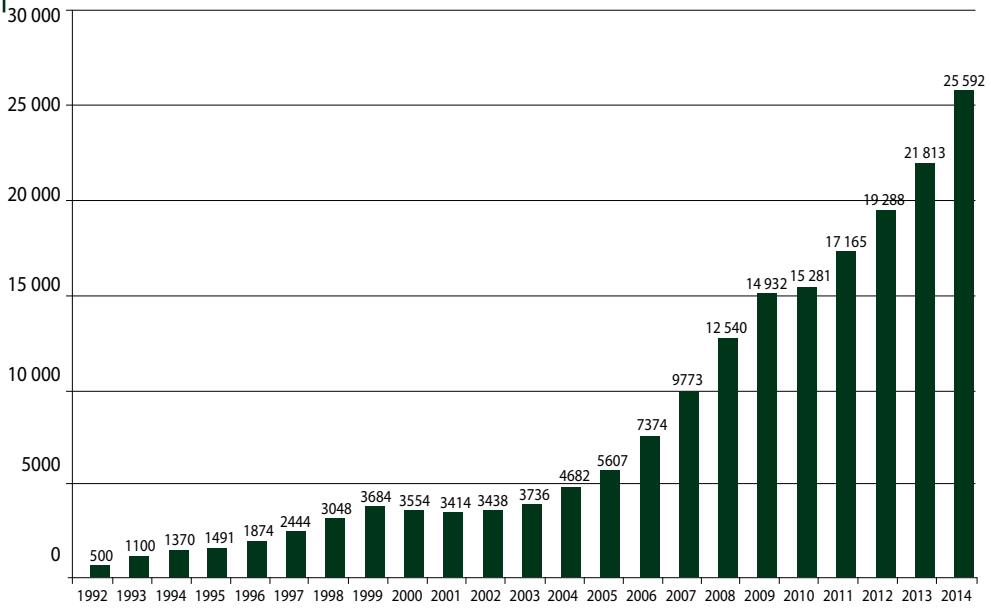
plants, 31 mills and groat mills, 75 refriegeration plants, as well as 415 stores, 147 hotels, inns, restaurants and bars, 672 social, cultural and sports facilities.

The main targets for allocation of real estate belonging to State Treasury included in the APS are sale and lease. They are executed e.g. in the form of open or restricted tender procedures. In total, from the beginning of its operation to the end of 2014, more than 1 246 000 tenders for sale and the lease of land were conducted. During this period, the Agency sold 2.6 million ha, mostly in the following provinces: Warmińsko-mazurskie, Zachodniopomorskie, Pomorskie, Dolnośląskie, Wielkopolskie and Lubuskie, which results from the territorial distribution of the APS real estate.

The lands being sold are purchased under a tender procedure (open and restricted tenders), as well as in a non-tender procedure (mainly by previous lessees). Recently, the Agency has significantly broadened the land offer referred to restricted tenders for individual farmers expanding their family farms (up to 300 ha of arable land). The area sold in restricted tenders constituted 57% of all lands sold in tenders in 2014.

It should be noted that, after Poland's accession to the European Union in 2004, a steep increase occurred in prices in transactions of arable land sales organised by the Agency. The highest increase in prices was recorded in 2007 (by 33% as compared to the previous year). In 2014, the price increase amounted to more than 17% as compared to the previous year.

Figure 39. Average prices of state-owned arable land in 1992-2014 (PLN/ha)



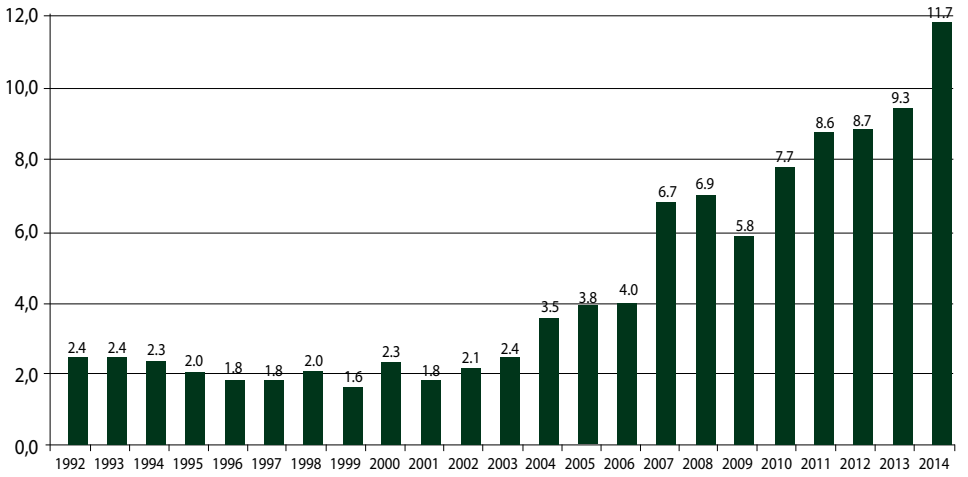
Source: data from APA.

Regardless of the sales, until the end of 2014, the Agency permanently distributed more than 635.6 thousand ha, including, among others: 153.7 thousand ha to State Forests, 56.1 thousand ha to local government units, 87.7 thousand ha to legal persons of church of various denominations, 59.8 thousand ha to other authorised entities, 219.1 thousand ha to regional water management authorities (mainly lands under lakes within flowing waters), and 24 thousand ha contribution in kind to companies. In other forms (transformation of the right of perpetual usufruct into the ownership right, reparcelling and replacement of grounds, elimination of co-ownership, etc.), 35.2 thousand ha was permanently distributed.

Lease is the basic form of non-permanent disposal of the APS real estate. Currently, nearly 1.09 million ha is leased, namely 73% of the APS area. The majority of the leased area is located in the area of operation of APA field branches in: Szczecin, Wrocław, Olsztyn, Poznań and Warsaw. Throughout the whole previous year, 55.7 thousand ha was leased.

In most lease contracts, the rent is expressed in decitonnes (dt) of wheat per hectare. In 2014, for newly concluded contracts, the average rent reached the amount of 11.7 dt/ha. The highest increase in average rents on a year-to-year basis was recorded in 2007 (increase by 68%). In 2014, the increase in average rents amounted to more than 26% as compared to the previous year. On the other hand, an average rent for arable lands (without rent for the components) for all pending lease contracts at the end of 2014 amounted to 3.9 dt/ha.

Figure 40. The average rent for newly concluded contracts in 1992-2014 (dt/ha)



Source: data from APA.

The Agricultural Property Agency, apart from arable land, offers also non-arable lands. They include mainly plots intended in the spatial development plan or in the study of the conditions and directions of spatial management of the commune: for industrial, shopping-service, residential, as well as sports and recreational development. These real estates are characterised by, among others, attractive location and clear legal status. Some of them are currently used for agricultural purposes and require works related to changing the spatial development plans. In 2014, the Agency sold nearly 1.4 thousand ha of such lands, for the amount of more than 250 million PLN.

APA exercises ownership rights in 43 plant and animal breeding companies of particular importance for the national economy. These companies conduct creative and conservative breeding, and gather the most valuable plant and animal genetic material, fundamental for the biological progress. The plant cultivation companies gather the most valuable genetic material of: cereals, legumes and Papilionaceous plants, grass, sugar beet, fodder beet, potato, rape, vegetables, flowers and decorative plants. These companies play the leading role in plant cultivation, as they hold 48.7% of shares among arable plant varieties and 58.6% among vegetable plant varieties from national cultivation, entered into the *Register of Varieties*. Animal breeding companies mainly breed cattle, as well as – to a smaller extent – swine and sheep. Stud farms, apart from the main activity, namely horse breeding, are also involved in breeding cattle and milk production. As a result, they maintain economic security and have financial means necessary for breeding. The APA companies also have genetic resources, in the form of domestic races of animals, adapted to the soil and climatic conditions.

The Agency, as it has been already mentioned, is a task-based institution. Its primary task is privatisation of state property in agriculture, and until completion of this process – rational management of the entrusted property. Despite the fact that the Agency permanently distributed more than 68% of land included in the APS, it still performs an important role in agricultural policy of the state, especially with regard to formation of the agricultural system.

Agricultural Social Insurance Fund

The Agricultural Social Insurance Fund (KRUS) is a social security institution implementing a social security system for farmers separate from the universal social security system, on the basis of the Act of 20 December 1990 on Farmers' Social Insurance (Journal of Laws Dz.U. of 2015, item 704, as amendments). The Fund is managed by the President as a central government administration body reporting to the Minister competent for rural development. The Council of Farmers' Social Insurance, appointed by the Minister competent for agricultural development, represents the affairs of the insured and beneficiaries, approves drafts of legal acts, action programmes and finance schemes of the Union, and also enjoys a right of control in relation to KRUS. The Fund implements farmers' social insurance by means of the organizational structure, consisting in: Head Office, Regional Branches, the operation of which covers individual provinces, as well as Local Offices, the operation of which covers the area of several communes. The KRUS organisational structure consists in: Head Office, 16 Regional Branches, 256 Local Offices, 6 Farmers' Rehabilitation Centres, 1 Rehabilitation and Training Centre.

The tasks of KRUS cover: service of farmers in the matters concerning coverage with social insurance, insurance contribution assessment and collection, awarding and payout of benefits of pension insurance and accident, health and maternity insurance, conducting, actitity aimed at dissemination of work safety principles on farms and elimination of hazards at the place of work and living of farmers, conducting voluntary, free-of-charge medical rehabilitation for people threatened with full inability to work on a farm.

The Fund also performs additional tasks ordered by the state, among others, service of the insured parties in the matters concerning settlement of individual income tax, payment of health insurance of farmers, household members, retirees and pensioners, as well as family members of the two groups of farming population, payment of additional benefits, e.g. war pensions, benefits for invalids of war and other benefits.

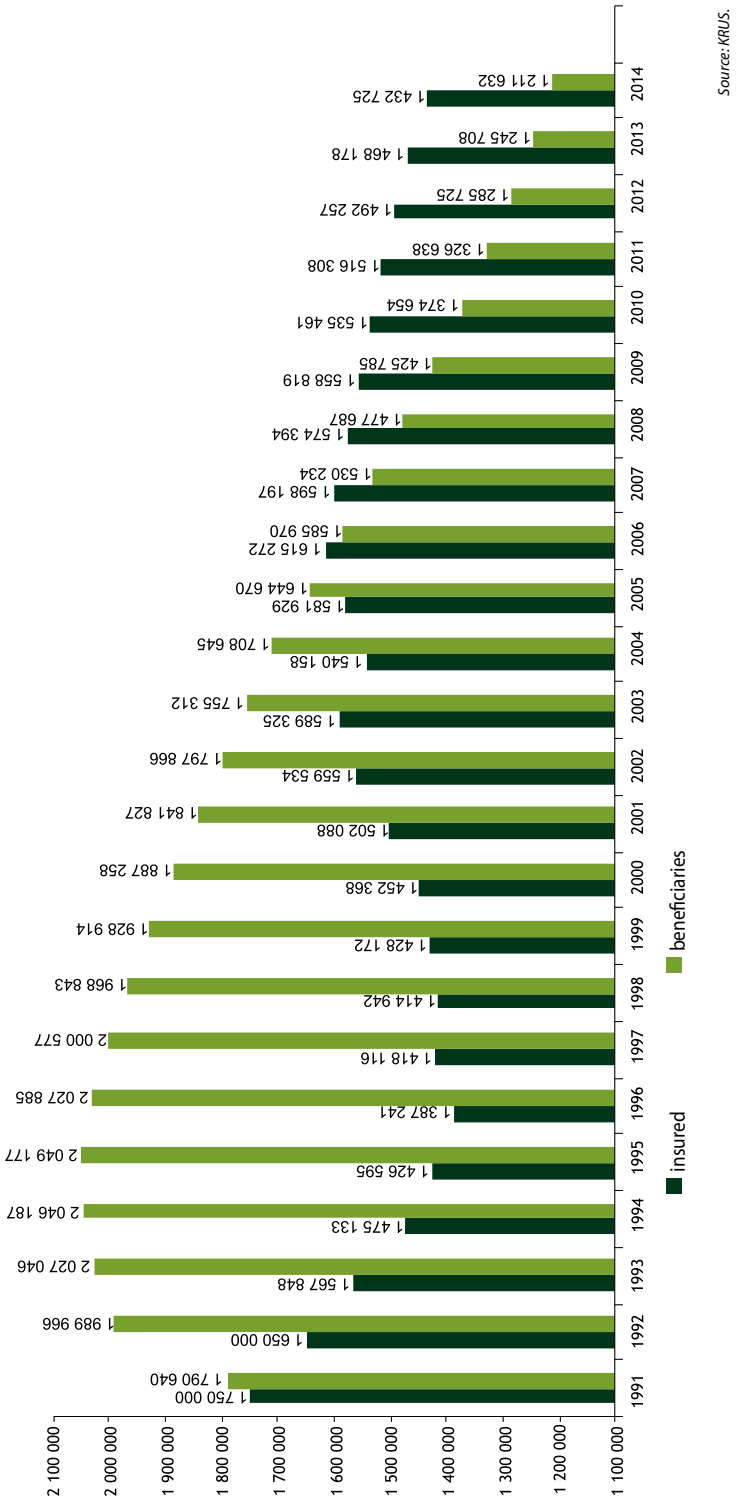
Functioning of the farmers' social insurance system

At the end of December 2014, farmers' social insurance covered 1 432 725 people, while 1 211 632 people received the pension benefits from this insurance (Fig. 41). The largest number of people received pension benefits in 1995 (2 049 177), and since that year their number has reduced by 837 545, i.e. by 40.9%.

Until 2005, the number of the insured people exceeded the number of persons receiving benefits, while since 2006, the number of the insured people exceeds the number of persons receiving benefits. The difference between these values increases. In 2006, the number of the insured was higher by 1.8% then the number of persons receiving benefits, while in 2014, this difference amounted to 18.2%.

The contributions in the farmers' social insurance system are paid for:

- The Pension Fund, intended for funding, among others, retirement and disability pensions, and benefits from another farmers' health insurance. The resources of this Penson Fund are also allocated on liabilities of the State Treasury towards persons, who – before 1990 – transferred to the State Treasury, free of charge, agricultural holdings with the total area of 2.2 million of physical hectares. The estimated value of this land amounts to more than 53 billion PLN;
- Contribution Fund, intended for funding, without using the budget subsidy, benefits into accident, health and maternity insurance, as well as for the financinf of a shortage of the Prevention and Rehabilitation



Source: KRUS.

Figure 41. The number of the insured and persons receiving benefits from KRUS in 1991-2014

Fund (in the amount of 5% of the planned expenses of the Fund) and the Administrative Fund (in the amount of 9% of the planned expenses of the Fund).

The amount of monthly contribution for retirement and disability insurance amounts to 10% of the basic pension. After indexation, since 1 March 2015, in the 2nd and 3rd quarter of 2015, the basic contribution for this insurance amounts to 88 PLN per month. The farmers, whose agricultural holdings cover the area of arable lands exceeding 50 ha, pay an additional monthly contribution for retirement and disability insurance, depending on the size of the holding.

The amount of monthly insurance contribution: accident, health and maternity insurance per one person, is determined by the Council of Farmers' Social Insurance, and announced by the KRUS President in the Official Journal of the Republic of Poland Monitor Polski. In the 2nd and 3rd quarter of 2015, this contribution amounted to 42 PLN per month.

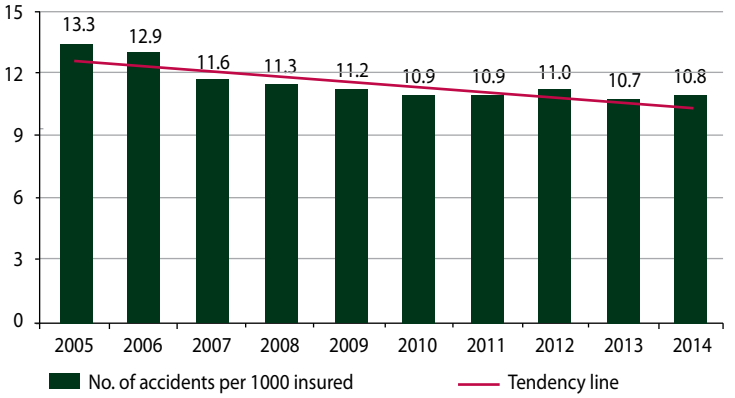
The system provides cash benefits from:

- the retirement and disability insurance – farmers' old-age pension, including partial old-age pension and periodic old-age pension, farmers' pension by virtue of incapacity for work, farmers' training pension, family pension, old-age and disability pension from social insurance for individual farmers and members of their families, allowances to old-age and disability pensions, as well as funeral allowance;
- the accident, health and maternity insurance – a one-off indemnity by virtue of permanent or long-term detriment to health or death resulting from an accident at agricultural work or a farmers' occupational disease, sickness allowance in the event of an illness continuously lasting for at least 30 days and no longer than 180 days, sickness allowance in the event of a prolonged illness lasting for a period exceeding 180 days, and not longer than further 360 days, maternity allowance.

Preventive actions of the Agricultural Social Insurance Fund result in reduction in the number of accidents at agricultural work, elimination of their causes, prevention of occupational diseases, as well as other farmers' occupational hazards. In 2014, the accident rate, calculated with regards to 1000 insured, amounted to 10.8 and has been stable for several years. The accident rate is characterised by a decreasing trend. In the years 2005-2007, the number of accidents per 1000 insured on average amounted to 12.2, and in 2012-2014 – 10.8 (Fig. 42).

Therapeutic rehabilitation carried out by the Agricultural Social Insurance Fund is a material health benefit serving the maintenance, improvement or recovery of capacity for work on a farm. The rehabilitation is mainly conducted in six specialist farmers' rehabilitation centres of KRUS. Rehabilitation is voluntary and does not limit the right to cash benefits from the farmers' social insurance, nor to health resort treatment financed by the National Health

Figure 42. The number of accidents per 1000 insured in 2005-2014



Source: KRUS.

Table 30. Budget subsidy for KRUS and its share in the state budget

Year	Budget subsidy for KRUS (PLN billion)	Percentage share of subsidies for KRUS in the state budget (%)
1999	13.3	9.6
2000	13.7	9.1
2001	15.4	8.9
2002	15.9	8.7
2003	15.5	8.2
2004	15.7	7.9
2005	15.4	7.4
2006	15.0	6.7
2007	15.8	6.3
2008	15.7	5.6
2009	16.4	5.5
2010	15.7	5.3
2011	15.8	5.2
2012	16.2	5.1
2013	16.5	5.1
2014	16.6	5.1
2015	17.6	5.1

Source: KRUS.

Fund. Rehabilitation benefits are each time granted upon the request of the medical doctor, who establishes the recommendations regarding direction of the person to medical rehabilitation.

The financial basis for the farmers' social insurance system are contributions paid by farmers , as well as subsidies from the state budget. In 2014, the budget expenses on tasks performed by KRUS amounted to approx. 16.6 billion PLN (Tab. 30). In 2015, in accordance with the budget legislation, subsidy for KRUS for implementation of the abovementioned tasks amounts to 17.6 billion PLN, which will constitute 5.1% of the state budget. Expenditures on retirement and disability benefits accounted for the majority of the KRUS plan of expenses and amounted to 14.7 billion PLN in 2014. The share of the subsidies for KRUS in the state budget has been gradually decreasing, from 9.6% in 1999 to 5.1% in 2015.

Benefits from farmers' social insurance

Benefits from the retirement and disability insurance

In 2014, the Agricultural Social Insurance Fund paid out retirement and disability benefits to ca. 1.2 million people. The overall amount of expenses of the Pension Fund for old-age and disability benefits amounted to more than 14 million PLN, and the average amount of farmers' retirement/disability pension amounted to 1 020.44 PLN. Farmers' pension is granted to an insured person, who reached the retirement age (the same as in ZUS) and has insured for a required period of time, amounting to at least 25 years along with classified periods, i.e. contributory and non-contributory, on which the right to pension in the common system depends; however, in the case people born after 31 December 1948, determination of the right to receive a farmers' pension takes account only of the farmers' insurance periods.

Furthermore, insured farmers after 55 years of age in the case of women, and 60 years of age in the case of men, may obtain the right to farmers' pension, commonly known as early retirement, if they ceased to engage in farming activities and are able to demonstrate being covered by the farmers' retirement and disability insurance for the period of at least 30 years. Such pensions are granted to farmers, who will meet the conditions necessary to obtain them until 31 December 2017. The youngest women, who will be able to apply for the right to such a pension were born on 31 December 1962, and the youngest men – on 31 December 1957. Persons born after these dates cannot obtain the farmers' "early retirement" pension.

In 2014, the Fund paid out an average of ca. 952 000 farmers' pensions per month.

Partial farmers' pension is granted to:

1) women, who reached the age of 62 and are able to demonstrate being insured for the period of at least 35 years,
2) men, who reached the age of 65 and are able to demonstrate being insured for the period of at least 40 years.

Periodic farmers' pension is granted to a person, whose structural pension expired, which was co-financed from the means of the Guarantee Section of the European Agricultural Guidance and Guarantee Fund or the means of the European Agricultural Fund for Rural Development, and who did not reach the retirement age, until the day of reaching this age. century.

In 2014, 210 partial and periodic pensions were granted.

Farmers' pension in virtue of incapacity for work is granted to an insured person, who meets jointly all the following conditions:

1) was covered by retirement and disability insurance for the required period of time (people, who are over 30 years old should be able to prove that they were being insured for at least 5 years, given that this period should be within the last 10 years prior to submission of the application for granting the farmers' pension in virtue of incapacity for work; in the case of younger persons, an accordingly shorter period is required – from 1 to 4 years),
2) is permanently or temporarily totally incapable of work on a farm,
3) total incapacity for work on a farm arose within the period of liability to the retirement and disability pension insurance.

If total incapacity for work on a farm arose was the result of an accident at a farming work or occupational disease, the condition of being insured for the required period of time is considered fulfilled, if the insured person can indicate any retirement and disability insurance period, which covers the day of the accident or the day of falling ill with the occupational disease. The periods of liability to the retirement and disability pension insurance include the periods of being liable to farmers' social insurance, as well as the contributory and non-contributory periods, similarly as in the case of the Social Insurance Institution (ZUS). The insured person is considered to be totally incapable of work on a farm, if he lost the capacity of personally carrying out works on the farm due to a handicap. The total incapacity for work on a farm is considered permanent, if the insured person is unlikely to regain the capacity to personally carry out works on the farm, and in such a case the disability pension is granted permanently. Otherwise, the total inability to work is considered temporary and the disability pension is granted for a period specified in the decision. Decisions on permanent and temporary total inability to work, constituting the basis for a decision concerning granting the disability pension, are issued by medical experts of the Fund in the first instance, and by the Fund medical committees in the second instance. Furthermore, the eligibility to an agricultural disability pension in virtue of incapacity for work, which was terminated as a result of returning to health, may be reinstated, if the insured has again become totally incapable to work on a farm within 18 months since the cessation of the right to the pension. The persons obtaining agricultural disability pensions in virtue of incapacity for work, who reached the retirement age, are granted ex officio the agricultural retirement pension that is not smaller than the hitherto received disability pension, if the person has been liable to the retirement and disability pension insurance for a required period of time.

The amount of agricultural retirement and disability pensions

The agricultural retirement and disability pensions consist in the contribution-related and the supplementary components. After becoming eligible for the pension, the contribution-related component is always paid out, while payment of the supplementary component can be suspended in full, in 1/2 or in 1/4, if the retiree or pensioner has not stopped carrying out farming activities (depending on the situation preventing cessation of carrying out farming activities). The payment of the supplementary component can be also suspended, if the retiree/pensioner receives income from activities covered by the obligatory social insurance (on similar terms as in the common insurance system). The height of the contribution-related component of the agricultural retirement and disability pensions depends on the length of the period of work and of liability to the social insurance, as well as on the amount of contributions paid for agricultural insurance in years 1983-1990. The contribution-related component is determined as 1% of the basic retirement pension for each year of payment of agricultural insurance contributions, and if within the period of 1983-1990, the contributions paid by the farmer exceeded 120% of the basic retirement pension, then the amount is calculated as more than 1% (proportionately to the amount of paid contributions). Furthermore, the periods of liability to another insurance (e.g. in virtue of employment or conducting non-agricultural business operations) are multiplied by one and a half; with addition that from 1 January 2009, for persons born after 31 December 1948, while calculating the amount of the farmers' retirement pension (including "early retirement" and partial pension), only the farmers' insurance periods are taken into account.

The supplementary component amounts to from 85% to 95% of the basic retirement pension, depending on the length of the insurance period assumed for calculation of the contribution-related component. In the case of the agricultural "early retirement" pension, the supplementary component is additionally decreased by 5% of the basic retirement pension for each year that is left to the retirement age.

The partial agricultural pension amounts to 50% of the amount of retirement pension that will be granted after reaching the retirement age. Conducting agricultural activities, as well as receiving income from other sources has no effect on payment of this benefit. Collecting partial agricultural retirement pension, as opposed to a similar retirement pension from the Social Security Institution (ZUS), has no effect on the future amount of the agricultural retirement pension, granted after reaching the retirement age.

The amount of periodic retirement pension is equal to the basic retirement pension, i.e. the lowest employee retirement pension, regardless of the period of liability to the retirement and disability pension insurance. In the case of conducting agricultural activities or receiving income from activities covered by the obligatory social insurance, payment of the supplementary component of the benefit (amounting to 95% of the basic retirement pension) is suspended on general terms.

The right to **the survivorship pensions and allowances** to the retirement and disability pensions, as well as to **the funeral allowances** is granted on similar terms as in the common insurance system.

The amount of survivorship pension is equal to 85% of the basic retirement pension, increased by 50% of the contribution-related component of the agricultural retirement or disability pension that the deceased person was or would be eligible for.

The amount of allowances to the retirement and disability pensions and the funeral benefit is identical, as in the common insurance system.

Benefits from accident, health and maternity insurance

One-off compensation is granted to:

- an insured farmer (member of the household), who suffered permanent or long-term detriment to health as a result of an accident at a farming work or an occupational disease;
- family members of an insured person, if the latter died as a result of an accident at a farming work or an occupational disease.

After recognising an event as an accident at farming works, a one-time compensation is established for the insured person at the level proportionate to the percentage of the permanent or long-term disability.

A decision concerning permanent or long-term disability is issued by medical experts of the Fund (in the first instance) or by the Fund medical committees (in the 2nd instance).
the insured (farmer, member of the household) is entitles to **sickness allowance**, if he is unable to work continuously for at least 30 days as a consequence of an illness, but not longer than for 180 days. The sickness allowance is granted and paid out on the basis of a medical certificate stating temporary inability to work, issued by a doctor authorised by ZUS. If, after exhaustion of the 180-day allowance period, the insured is still unable to work, and after further treatment and rehabilitation it is likely that he will recover the capacity to work, the allowance period is extended by a period necessary to restore full work capacity, but not longer than by subsequent 360 days. The sickness allowance for temporary inability to work lasting more than 180 days is granted and paid out on the basis of a decision, issued by a medical expert of the Fund (in the first instance) or by the Fund medical commission (in the 2nd instance).
Sickness allowance will not be granted for the period:

- which the insured person spent on rehabilitation in a health care institution, at the expense of the Fund;
- following the expiry of the insurance.

The insured person (farmer, member of the household) is entitled to **the maternity allowance** for:

- giving birth;
- accepting the responsibility for rearing a child under 7 years of age, and in the case of a child, in respect to whom a decision was made to postpone the school obligation – under 10 years of age, if an adoption application was filed at that time;
- accepting the responsibility for rearing a child under 7 years of age as a professional foster family, and in the case of a child, in respect to whom a decision was made to postpone the school obligation – under 10 years of age – in the amount of four times the basic retirement pension.

If both parents are liable to the insurance, they are eligible jointly for the maternity allowance, i.e. the parent, who applied receives the allowance. A person covered by the voluntary KRUS insurance is eligible for the maternity allowance, if the period of insurance liability lasted for at least a year, directly before occurrence of the event that justified acquisition of the right to the benefit (i.e. before delivery). The rights to maternity benefit are granted on the basis of the filed application, along with the abbreviated copy of birth certificate of the child or a certificate of a court on the submission of an application for child adoption.
Since 2004, KRUS participates in implementation of tasks relating to coordination of social security systems in the Member States of the European Union (EEA and Switzerland), currently resulting from the provisions of Regulations 883/2004 and 987/2009 of the European Parliament and the European Council (EEC). Since 1992, KRUS is a member of ISSA (International Security Systems Association), which includes social insurance institutions from 156 countries from one of the largest international associations of social security institutions in the world. Furthermore, since 2000, KRUS is a full member of the European Forum of Insurance Against Accidents at Work and Occupational Diseases, and since 2004, it belongs to the European Network of Agricultural Social Protection Systems (ENASP), gathering 6 UE countries, having similar social security systems for farmers involving measures from the state budget.
The subsidies for the KRUS statutory tasks do not differ significantly from the level of financing of similar social insurance systems in the EU; there is a constant tendency to reduce their amount.

Scientific-research facilities in Poland

Structure and supervision

Research institutes operate pursuant to the Act of 30 April 2010 on Research Institutes (Journal of Laws Dz.U. No. 96, item 618). In legal terms, these are state organisational units, legally, organisationally, economically and financially separated, which conduct scientific research and development works, focusing on their implementation and application in practice.

In Poland, the following entities work on scientific research for agriculture and agricultural markets, fishery and rural development.

I. Research institutes (12), supervised by the Minister of Agriculture and Rural Development (7 of them have the status of a National Research Institute):
   - Institute of Agricultural and Food Biotechnology in Warsaw,
   - Institute of Agricultural and Food Economics – National Research Institute in Warsaw,
   - Plant Breeding and Acclimatisation Institute – National Research Institute in Radzikowo,
   - Institute of Plant Protection – National Research Institute in Poznań,
   - Research Institute of Horticulture in Skierniewice,
   - Inland Fisheries Institute in Olsztyn,
   - Institute of Technology and Life Sciences in Falenty,
   - Institute of Soil Science and Cultivation – National Research Institute in Puławy,
   - Institute of Natural Fibres and Medicinal Plants in Poznań,
   - Institute of Animal Production – National Research Institute in Balice,
   - National Marine Fisheries Research Institute in Gdynia,
   - National Veterinary Research Institute – National Research Institute in Puławy.

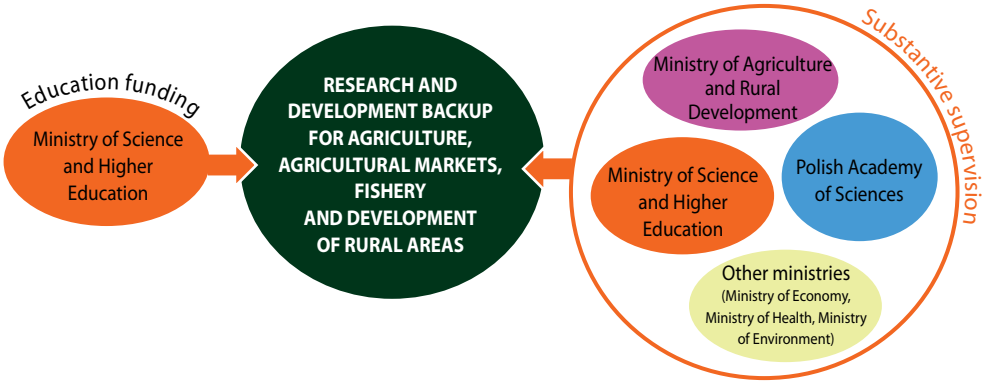
II. Institutes of higher education (9 universities, 47 faculties) supervised by the Minister of Science and Higher Education.

III. Scientific institutes of the Polish Academy of Sciences (9).

IV. Research institutes partially concerned with agriculture related subjects, controlled by other ministries (Ministry of Environment, Ministry of Economy and Ministry of Health).

Diagram 1 presents the organisational structure of substantive supervision over statutory activities of scientific and research units regarding agriculture, agricultural markets, fishery and rural development, as well as the source of basic funding.

Diagram 1. Organisational structure of substantive supervision over statutory activities of scientific and research units regarding agriculture, agricultural markets, fishery and rural development, as well as the source of basic funding



Source: MARD.

Objective

The strategic objective of development of the Polish science is the use of science to increase the civilisation level of Poland, among others, by pursuing goals specified in the National Research Programme and more complete implementation of its results as part of innovative partnerships. A particularly important task of the Polish science is contributing to mitigation of the civilisation gap between Poland and countries highly developed in economical terms, as well as to improvement in the quality of life of the Polish society and to fulfillment of development aspirations of the current and the future generations, in accordance with the principle of sustainable development. The following elements constitute the basis for implementation of the objective so specified, to an equal extent: increase in budgets on research and development activities in Poland, as well as determination of new principles of the utilisation of these funds, better adapted to the contemporary conditions. New organisational principles for research and indication of the priority areas of scientific activity have to correspond to the new funding conditions. This will lead to an increase in effectiveness of science in Poland, defined as provision of results and scientific research outputs with high cognitive quality, as well as high social, economic and technological usability.

At the same time, the undertaken actions will constitute a response to the challenges outlined in the strategy *Europe 2020*, focused on achieving intelligent, sustainable development, beneficial for social incorporation. Promotion of innovative capacities is particularly important for support of investments, diversification of economy and reorientation towards production and services with high added value by strengthening the relations between higher education, the research sector and the innovations system.

The Ministry's institutes have a huge scientific potential (personnel, research area, equipment, etc.) It has a unique character on an European scale, and some units are one of the most advanced in the world. They perform research tasks at a high scientific level, and their results effectively aid decision making processes in the area of agricultural policy executed by the Minister of Agriculture and Rural Development.

Funding of science

Financial measures for scientific-research and development activities within agriculture are obtained:

- from budget allocations of the Ministry of Science and Higher Education;
- under participation in international scientific and technical cooperation programmes;
- for scientific-implementation services and works performed for the benefit of business entities and farmers, carried out under statutory activity;
- from the budget of the Minister of Agriculture and Rural Development on activities in the scope of public services, under long-term programmes, biological progress and environmental research;
- from other sources, such as: popularisation and advisory activity, lease, capital interest, etc.

Intellectual potential

Scientific-research facilities of institutes under the Minister of Agriculture and Rural Development constitute a substantial intellectual potential supporting the agriculture sector (agriculture, fishery, agricultural markets, processing, quality of living of the population and development of rural areas). Table 31 presents the state of employment in research institutes as at 31.12.2014.

The work of scientists supports both the national agricultural policy, as well as the Common Agricultural and Fisheries Policy of the European Union. The scientific environment actively participates in the overhaul of the system and in the national agriculture modernisation processes – improvement in its effectiveness, competitiveness and quality of food products. The scientists carry out their mission by conducting research, innovative, implementing and popularisation activities.

Table 31. Employment in scientific-research institutes for agriculture, agricultural markets, fishery and rural development

Item	Name of research institute	Job positions in total in 2014	Researchers in 2014
1.	Institute of Horticulture	534	158
2.	National Plant Breeding and Acclimatisation Research Institute	488	135
3.	National Veterinary Research Institute	560	114
4.	National Research Institute of Animal Production	504	80
5.	National Research Institute of Soil Science and Cultivation	424	68
6.	Institute of Technology and Life Sciences	377	98
7.	National Research Institute of Plant Protection	305	103
8.	Institute of Agricultural and Food Biotechnology	247	73
9.	National Marine Fisheries Research Institute	218	25
10.	Inland Fisheries Institute	173	48
11.	Institute of Natural Fibres and Medicinal Plants	164	67
12.	National Research Institute of Agricultural and Food Economics	156	79
	Total	**4 150**	**1 048**

Source: MARD.

International cooperation

In order to ensure conditions for cooperation with partners from the EU states, the research institutes of the Ministry of Agriculture and Rural Development created Centres of Excellence and Centres of Competence:

- in the National Plant Breeding and Acclimatisation Research Institute *Crop Improvemet Centre for Sustainable Agriculture [CICSA]*,
- in the National Marine Fisheries Research Institute *Centre of Excellence in Marine Fisheries Sciences [POLMARF]*,
- in the Institute of Horticulture – *Research Centre of Excellence in Sustainable Pomology [PomoCentre]*,
- in the National Research Institute of Soil Science and Plant Cultivation – *Protection of Land and Water Quality and Sustainable Development of Rural Areas [PROLAND]*,
- in the Institute of Technology and Life Sciences – *Renewable Energy Centre of Excellence and Competence in Poland [RECEPOL]*, as well as *Transfer of Knowledge in Agricultural Engineering [TRAGEN]*,
- in the Institute of Natural Fibres and Medicinal Plants – *Medical plants in nutrition and medicine – a step towards integration engineering with European standards [MEDNAM]*.

Furthermore, Centre of Advanced Technologies is located near the Institute of Horticulture in Skierniewice, the operation of which is focused on the improvement in the transfer of research results into practice.

Research works are continued in the Virtual Institute of Sustainable Agriculture (WIRZ), which is a publicly available, real-time electronic information and research program with a constantly updated database.

As part of their scientific-research activities, the scientific environment of research institutes actively engages in works on fulfilling the tasks resulting from the European Union Strategy *Europe 2020*, prepared by the European Commission, as well as from the programme *Horizon 2020*.

National Research Institute of Agricultural and Food Economics

The Institute of Agricultural and Food Economics is an independent scientific and research centre with more than 60 years of scientific achievement and experience in analysing economic and production processes in the Polish agriculture and food economy. It was established in 1950 as the Agricultural Economics Institute. In 1983 it merged with the Food Industry Economics and Organisation Institute and since then it has operated under the name of the Institute of Agricultural and Food Economics. By way of the Decision of the Council of Ministers, dated October 2004, it obtained the status of the state research institute, and since 1 January 2005 it has operated as the Institute of Agricultural and Food Economics – National Research Institute (IAFE-NRI).

The scientific staff of the Institute comprises 14 professors, 7 assistant professors (PhD hab.), 32 doctors (PhD), 30 assistants and 6 technical research specialists, employed in 9 scientific departments: General Economics Department, Economics of Farm Holdings Department, Market Research Department, Social and Regional Policy Department, Food Industry Economics Department, Agricultural Finance Department, Horticultural Economics Department, Agricultural Accountancy Department, and Mathematics Application in Agricultural Economics Department.

The scientific research conducted at IAFE-NRI is focused on key issues of the economic, production and social situation of rural areas in Poland, on agriculture and on broadly understood food economy. The research is carried out as part of the statutory activity and the four-year research programme launched in 2011, entitled "Competitiveness of the Polish Food Economy in the Conditions of Globalisation and European Integration". In 2014, the Institute worked on 10 research topics as part of statutory activities, namely:

- Unit costs of the selected agricultural products;
- Economic aspects of rural and agricultural development;
- The financial policy concerning the agricultural and rural sector in the conditions of changeable economic environment at the national, EU and global levels;
- Effectiveness of business entities in agriculture, selected theoretical and practical aspects;
- Transformation of the food industry in the light of globalisation and European integration processes;
- Research of agri-food markets;
- Processes of social development in rural areas and agriculture;
- Analysis of the production and economic situation of agriculture and food economy;
- Polish horticulture in the Single European Market;
- Analytical and methodological aspects of proper management in agriculture and the agri-food sector.

The multi-annual research programme is composed of 26 tasks focused around 8 major topics, namely:

- Assessment of the development conditions and challenges for the agri-food sector in Poland at the background of the global trends;
- Monitoring of agri-food markets under changing economic conditions;
- Analysis of the effects of selected instruments of Common Agricultural Policy and Rural Development Policy;
- Competitiveness of sustainable agriculture;
- Budget grounds for improvement of the competitiveness of the Polish agriculture;
- Changes in the socio-economic structure of rural areas as a competitive factor of rural areas;
- Competitiveness of Polish agricultural holdings and agricultural products at present and in a mid-term perspective;
- Application of economic modelling in the analysis of the premises of competitive development of the agri-food sector.

The results of analyses of the programme are available under open access at www.ierigz.waw.pl in the form of subsequent reports, the monthly journal "Agricultural Market" and the annual publication "The market of agricultural land. Condition and perspectives".

The third mode of operations of the Institute is exercising, since May 2004, the function of a Liaison Agencies of the Farm Accountancy Data Network (FADN). It consists in collecting accounting data from agricultural holdings

under the European system. The FADN system is a tool supporting programming and implementation of the Common Agricultural Policy in 28 EU member states. The Liaison Agency is obliged to provide accounting data from a representative sample of 12 100 agricultural holdings to the FADN and to national decision-making, advisory and scientific-research entities. The collected data are used, among others, to assess the production and economic situation of the farms, as well as to conduct multidimensional analyses of the effects of agricultural policy. The data are also transferred to farmers taking part in the system, in the form of individual and comparative reports. The standard results of analyses are published at www.fadn.pl and are made available free of charge.

IAFE-NRI is also the coordinator of the International Research Network "European Rural Development Network" (ERDN) set up in 2002. It gathers the leading institutes and academic centres from the fields of economics, ecology, geography, soil science, hydrology, sociology, technical sciences, and cybernetics from Poland, Germany, Austria, Romania, Hungary, Slovakia, Lithuania, Finland, and Sweden. The main objectives of the Network are:

- establishing cooperation with European research and development institutes in the scope of development of rural areas from the point of view of various scientific disciplines;
- programming common, multidisciplinary researches;
- preparing and coordinating common research projects;
- exchanging and popularising research findings.

Detailed information on the ERDN are available at www.erdn.waw.pl.

In 2014, the main research topic involved issues related to transformation of rural areas in European countries, as well as programming of support for the years 2014-2020. The conference was dedicated to these issues, entitled *Rural development in Eastern EU and neighborhood countries – present and future.*

An important place in the scientific achievements of the Institute is taken up by sets of original and unique empirical data, which have been collected for many years on the basis of field studies. In the Agricultural Accountancy Department under the Agricultural Accountancy System, and since 2003 under the Polish FADN, information about economic and production results of individual holdings are collected. Every 4-5 years, the Social and Regional Policy Department conducts a survey in 76 Polish villages concerning the production, economic and social situation of agricultural holdings. IAFE-NRI also collects data of the Central Statistical Office (GUS) concerning the economic and financial situation of the food industry, production and food prices, as well as CIHZ data about the situation in foreign trade of agri-food products. The results of IAFE-NRI research are applied to shaping the state policy concerning rural areas and agriculture. To the order of the most important state administration authorities (Sejm, Senate, Council of Ministers Office, Chancellery of the President, Ministry of Agriculture and Rural Development, Ministry of Finance, Supreme Chamber of Control), government agencies (ARR, ARMA), courts and statistical offices, as well as enterprises, companies and unions of producers and processors, expert's reports are prepared on the situation of food economy and rural areas. Research and expert articles are published in the Institute's own publications in the series "Press Reports Expertise", "Studies and Monographs", "Market Analysis" and in non-series books, as well as in publications of other scientific centres and in national magazines, e.g.: "The Economist", "Problems of Agricultural Economics", "Village and Agriculture". The current offer of the Institute's publications is available at www.ierigz.waw.pl. Scientific works of IAFE-NRI are bought by approximately 380 institutions across the whole country.

The Institute cooperates with national and foreign research centres. In Poland, it cooperates with 9 scientific institutes and 17 universities. International cooperation of IAFE-NRI focuses on integrating the research activity conducted by the Institute with the European and global domain of research. In 2014, international cooperation involved scientific institutes and universities from 20 European countries, as well as from the USA. The said integration entails continual training of scientific staff and the participation in various research teams, dealing with the issues of agricultural and rural development at a supranational level. For example, under the 7th EU Framework Programme, IAFE-NRI participates in the project "Farm Level Indicators for New Topics in Policy Evaluation (FLINT)" and developed a set of indicators that may be used for assessment of sustainability of agricultural holdings.

Main Inspectorate of Plant Health and Seed Inspection

The Main Inspectorate of Plant Health and Seed Inspection is the official body responsible for supervision of plant health, as well as supervision of protection, assessment and marketing of seed material. The State Plant Health and Seed Inspection Service includes the Main Inspectorate and 16 Province Inspectorates, comprising 256 field branches and delegations and 12 border branches. At the end of 2014, the number of employees in the Inspectorate was 2 206 people, while the its budget for 2014, according to the budgetary legislature, amounted to ca. 131 million PLN.

Detailed tasks of the State Plant Health and Seed Inspection Service

Supervision of the marketing and use of plant protection products

The scope of actions of the Inspectorate with regard to the supervision of the sale and use of plant protection products, implemented on the basis of the provisions of the Act of 18 December 2003 on Plant Protection (Journal of Laws Dz.U. of 2014, item 621, as amended) and the Act of 8 March 2013 on Plant Protection Products (Journal of Laws Dz.U. of 2015, item 547), include the following official measures:

1) inspections of entities conducting production of plant protection products in order to verify their compliance with the requirements of the provisions of the Act on Plant Protection Products, as well as of the Regulation (EC) No. 1107/2009 of the European Parliament and of the Council of 21 October 2009 concerning the placing of plant protection products on the market and repealing Council Directives 79/117/EEC and 91/414/EEC, (Official Journal Of the EU L 309 of 24.11.2009, page 1, as);
2) authorisation of organisational units to carry out the plant protection products efficacy trials and supervision of the compliance with the principles of Good Experimental Practice as defined by Article 3 point 20 of the Regulation No. 1107/2009;
3) maintaining a regulated activities register with regard to marketing and repackaging of plant protection products, including inspections of entities conducting activities in this respect;
4) supervision of storage and transport of plant protection products;
5) inspections of packaging of plant protection products available on the market in order to verify their compliance with the requirements of the provisions of the Act on Plant Protection Products, as well as of the Regulation No. 1107/2009;
6) inspections of the composition or physical or chemical properties of plant protection products introduced to the market;
7) supervision of introduction of plant protection products to the market;
8) supervision of plant protection products advertising within the scope specified in the Regulation No. 1107/2009;
9) supervision of application of plant pesticides;
10) maintaining a record of organisational units to confirm technical fitness of equipment intended for application of plant pesticides, including inspections of entities conducting activities in this respect;
11) authorisation of organisational units to offer services in the scope of certification in integrated plant production, control of compliance of operations of these entities with regulations related to integrated plant production, as well as performance of operations with regard to certification in integrated plant production;
12) maintaining a register of organisational units to carry out training courses in the scope of plant protection products, including inspections of entities conducting activities in this respect;
13) monitoring of plant protection products consumption.

The registers of entrepreneurs authorised to repackage and introduce plant protection products to the market kept by the Province Inspectates of Plant Health and Seed Inspection regulated the market of these products and, first of all, made it possible to control it. At the end of 2014, in the registers of the State Plant Health and Seed

Inspection Service, 6131 entrepreneurs were recorded, repackaging and selling plant protection products. The number of entries to the regulated activity register shows an upward trend, which results in a growing number of sale points.

The Inspectorate also conducts official inspections of the quality of authorised plant protection products. This task is intended to verify whether plant pesticides manufacturers fulfill the qualitative requirements approved in the registration process. The official control covers plant protection products approved for trade by the Minister of Agriculture and Rural Development. In 2014, the Inspectorate took 310 samples of plant protection products for analyses. In 2014, as a result of the controls, the Inspectorate withdrew from the market 61 293.71 kg/l plant protection products not approved for sale, not meeting the requirements specified in the permit, products that changed their composition or physical or chemical properties, expired and counterfeit products, products in packages not meeting the requirements of the permit or improperly labelled.

Under the supervision of the correct use of plant pesticides the PIORiN inspectors conducted 23 500 inspections in 2014. The subject of inspections concerned verification of execution of obligations resulting from regulations by entities using plant protection products. First of all, the Inspectorate verified completion of trainings with regard to the use of plant pesticides, as well as possession of a valid certificate proving completion of the aforementioned training, correctness of documentation keeping of the performed procedures, technical efficiency of equipment for application procedures and possession of documents confirming this efficiency, as well as performance of plant protection procedures according to the recommendations contained in the product's label. As a result of inspections conducted in 2014, 1489 irregularities were observed, which resulted in issuing 800 fines and pursuing 25 claims in court. These irregularities were related mainly to: misuse of a plant protection product, missing or improper documentation on performed plant protection procedures, no verification of technical fitness of equipment for application procedures, no completed training, as well as application of a plant protection product in a manner creating hazard for health of people, animals or for the environment.

As part of the official inspections, samples of crops are taken in order to test them for the presence of residues of plant protection products. In 2014, 2491 crop samples were tested, including, among others, 985 samples of fruit and 1000 samples of vegetables. The maximum residue levels (MRL) were exceeded in the case of 32 samples (1.3%), including 28 cases covered by the notification procedure in the Rapid Alert System for Food and Feed – RASFF. The conducted tests also proved the presence of substances prohibited for use in particular cultivations.

The statutory obligation of verification of technical fitness of equipment intended for application of plant pesticides has been introduced in 1999. These tests are performed by entities entered into registers kept by the competent Province Inspectorates of Plant Health and Seed Inspection. Poland has 386 units authorised to conduct verifications of technical fitness of equipment intended for application of plant pesticides. At the end of 2014, 181 607 pieces of equipment intended for application of plant pesticides had valid certificates confirming their technical efficiency. Additionally, in 2014, Poland had 1428 pieces of equipment intended for application of plant pesticides brought for the first time into service.

Activities consisting in conducting training courses in the scope of plant protection products also require entry in registers. Until 31 December 2014, 357 units conducting trainings were entered into the registers kept by the Province Inspectorates of Plant Health and Seed Inspection. In 2014, 5605 training courses in the scope of plant protection products were conducted, including 1544 basic trainings and 4061 supplementary trainings. 140 287 people completed trainings.

The tasks of the Main Inspector of Plant Health and Seed Inspection include issuing authorisations to carry out efficacy trials of a plant protection product. Out of 42 entities having a GIORiN authorisation, 34 entities conducted trials in 2014. The Main Inspectorate of Plant Health and Seed Inspection, in order to ensure effective supervision of the sale and use of plant protection products, monitors consumption of plant protection products. The collected information relate to the type and quantity of the plant protection products used for particular cultivations (detailed data on the conducted monitoring are presented every year in the publication on the situation on the market of the plant protection products).

Since 2004, the Inspectorate supervises and certifies integrated plant production (IP). In 2014, Province Inspectorates of Plant Health and Seed Inspection issued 3067 certificates to agricultural producers, 103 of which for cultivation carried out in accordance with plant protection programmes developed to cover the requirements and standards of the Russian Federation. The IP certificates issued by the Inspection in 2014 covered 18 731.33 ha of arable land, where 559 385.2 tons of crops were produced. Apples accounted for the majority of the production. With regard to the supervision of the IP, the PIORiN inspectors conducted 3013 inspections to verify the compliance of cultivation with the requirements of the IP, as well as collected 309 crop samples, in order to examine them for residues of plant protection products. Irregularities were detected in 6 samples. 141 crop samples were also collected, in order to test them for the presence of residues of heavy metals, nitrates and other harmful elements and substances, but no irregularities were detected therein.

Plant health – phytosanitary supervision

The most important tasks related to phytosanitary supervision include conducting official activities concerning control and prevention of spreading of harmful organisms, as well as tracking the movement of plant products. All actions undertaken in this scope should ensure safe, in phytosanitary terms, import into the territory of the European Union and trade in plant material within the member states, as well as enable export of products to third states, i.e. outside the European Union.

In order to fulfill the aforementioned objectives, the Inspectorate conducts targeted, official health inspections of plants, plant products and items at the places of production, sale, as well as during transport of plant material within the country. Phytosanitary supervision is also conducted, of plants, plant products and items introduced to the EU member states through the Polish border, being an external frontier of the European Union. The control covers visual evaluation and, in certain cases, laboratory tests. At the same time, entities involved in production, distribution or import of plant materials bearing risk of introducing and spreading particularly harmful organisms (the so-called quarantine organisms) are obliged to obtain an entry in the official registry kept by the State Inspectorate of Plant Health and Seed Inspection.

Positive results of official inspections constitute the basis for the Inspectorate to issue special documents – the so-called plant passports, attached to the plant materials transported within the European Union, or other documents used, among others, for certification of plant material exported beyond the borders of the European Union, such as phytosanitary certificates or attestations.

In the case of observing or suspecting presence of any quarantine organisms, the Inspectorate undertakes a number of actions aimed at eradication of the organisms and preventing their further spread. These actions include determination of the source and extent of contamination, determination and supervision of execution of actions that should be undertaken by the holder of the contaminated plant material (e.g. use of appropriate cultivation procedures, destruction of the plant material, ban on plant trade or their transport beyond a specific place).

Detailed tasks implemented as part of supervision of plant health include:

1) phytosanitary supervision of plants, plant products or items, ground and soil, as well as means of transport at the points of entry and within the territory of Poland, including sampling plants, plant products for laboratory tests;
2) prescribing (by administrative decisions) procedures for plants, plant products or objects subject to phytosanitary border control;
3) assessment of the risk of plants being contaminated by harmful organisms, as well as keeping of records on these organisms;
4) issuing decisions concerning eradication of harmful organisms;
5) identification and improvement of methods and terms for eradication of harmful organisms, as well as prevention of their further spreading;
6) administering the register of entrepreneurs;

7) issuing phytosanitary certificates, plant passports and attestations;
8) supervision of procedures of purification, disinfection and processing of plants, plant products and objects;
9) notifying the plant protection organisation of the state, from which the plants, plant products or objects were imported, about their retention;
10) supervision of the scientific and research works with the use of quarantine organisms, plants, plant products or objects contaminated by quarantine organisms or not meeting the health requirements, prohibited to enter the territory of Poland.

As part of phytosanitary inspections for export of goods of plant origin to third states, in 2014, the organisational units of the State Plant Health and Seed Inspection Service issued ca. 81 000 phytosanitary certificates, addressed to 111 states. Nevertheless, most documents (i.e. 88%) were attached to consignments exported to: Belarus (28 606 certificates), Russian Federation (28 592 certificates) and Ukraine (11 695 certificates). As part of phytosanitary border control (inspections of plants, plant products and objects introduced to the EU member states through the Polish border), ca. 13 200 consignments underwent inspection.

In 2014, the number of the entities registered due to phytosanitary reasons in the register of entrepreneurs, kept by the State Inspectorate of Plant Health and Seed Inspection amounted to ca. 62 000.

As part of implementation of the tasks related to supervision of marketing of plant material within the EU, the Inspectorate issued in 2014 nearly 2.5 million plant passports – documents to be enclosed to plants, plant products and objects, certifying that these materials were manufactured by an entity registered in the register of entrepreneurs and that they meet all phytosanitary requirements, or that they underwent phytosanitary border control during their entry into the territory of the European Union that verified the compliance with the requirements concerning plant health. Thanks to the data contained in the plant passport, it is possible to quickly identify the place of origin of the plant material available on the market. Therefore, the plant passport enables identification of sources of possible contamination of plants, plant products and objects by quarantine organisms. Nevertheless, this depends on the production scale of materials covered by obligatory passports, as well as on the way the producers fulfill this obligation (e.g. individual plants or collective packaging).

In 2014, the Main Inspectorate of Plant Health and Seed Inspection issued a total of 123 certificates confirming lack of bacteria *Clavibacter michiganensis* ssp. *sepedonicus* in potato tubers. The tonnage of potatoes transported to the European Union member states amounted to ca. 2.6 thousand tons. In accordance with the valid regulations in this scope, shipments of potatoes transported from Poland to other member states of the European Union must have certificates issued by the Province Inspector of the State Plant Health and Seed Inspection Service, confirming absence of bacteria *Clavibacter michiganensis* ssp. s *epedonicus* (the cause for ring rot) in the potato tubers batch.

As a result of control activities, undertaken by the Inspectorate within the territory of Poland, for instance, in terms of assessment of health of plant materials, nearly 111 000 inspections were conducted in 2014 for the presence of harmful organisms. During these inspections, 15 quarantine organisms were detected (which could cause significant economic losses and, as a result, subject to mandatory eradication on the basis of respective legal provisions), in 959 production sites in total. In all cases of detection of a quarantine organism, according to the requirements of the European Union and the international standards, a number of actions aimed at eradication of such organisms were undertaken, thanks to which it was possible to prevent their further spread. Particular attention should be paid to the results of activities restricting the presence of bacteria *Clavibacter michiganensis* ssp.*sepedonicus,* the cause for a dangerous quarantine diseases in potato crops. As a result of detection of quarantine organisms, 1516 administrative decisions on eradication of these organisms were issued in 2014. Due to the obligations specified in administrative decisions concerning eradication of quarantine organisms, the employees of the Inspectorate conducted in 2014, 1238 inspections with regard to fulfilling the obligations specified in these decisions.

As part of the activities supporting producers and operators, in connection with applying measures aimed at eradication of the quarantine organisms, by the Main Inspector of the State Plant Health and Seed Inspection Service grants special subsidies from the state budget. In 2014, subsidies were granted for the amount of nearly 440 thousand PLN.

In 2014, the Main Inspector received **7** applications for obtaining a permit for conducting works with the use of quarantine organisms and contaminated plant materials or plant materials not meeting the health requirements, or such plant materials that cannot be introduced and transported within the European Union. In addition, in 2014, the Main Inspector of the State Plant Health and Seed Inspection Service issued 101 transport documents required for transport/import of quarantine organisms or plant materials not meeting the specific phytosanitary health requirements.

Seed material supervision

The tasks of PIORiN, pursuant to the Act on Seed Production, the Act on Plant Protection, the Act on Organic Farming, and the Act on Production and Bottling of Wine Goods, Their Trade and the Wine Market Organization, include the following official actions:

1) field and laboratory assessment, as well as assessment of external characteristics of seed, and accredited sampling of seed;
2) supervision of compliance with the principles and the binding requirements with regard to production, assessment, storage, sale and use of seed, including genetically modified seed;
3) issuance of accreditation for sampling and assessment of seed, and supervision of the compliance of this accreditation;
4) issuance of official labels and seals, as well as supervision of suppliers authorised to print official labels;
5) issuance of permits for the use of devices for automatic sampling of seed, as well as supervision over correct operation of this device;
6) supervision of plant reproductive material imported from third states;
7) keeping records of entrepreneurs and farmers selling seed material, as well as suppliers dealing with nursery plants and propagating and planting material of vegetables and decorative plants;
8) supervision of the sampling system and of assessment of seed by accredited entities;
9) issuance of official labels and official seals;
10) participation in comparative tests of the EU;
11) maintaining a list of organic materials and issuance of issuing permits for use of conventional reproductive material;
12) supervision of grapevine cultivations, the fruit of which are used in wine production.

In 2014, as a part of the task related to field assessment, 15 714 seed plantations of agricultural crops were assessed officially and by accredited entities, having the total area of 118 752.4 ha. 15 231 of these plantations were accredited, with the total area of 115 570.8 ha. As compared to the previous year, the area of accredited seed plantations of agricultural crops increased by 0.2%. The increase was caused, first of all, by the increase in the seed areas of oilseeds and fiber crops (white mustard and soya beans) by 85%. The largest area among the seed plantations of agricultural crops, in the group of cereals, was occupied by winter wheat (28 195.6 ha), winter triticale (12 655.7 ha) and spring barley (12 052.7 ha). On the other hand, a decrease in accredited seed cultivation area occurred in the group of cereals – by 11.1%. As compared to the previous year, the area of seed plantations of potato increased by 10.2% and amounted to 5281.8 ha, 5242.1 ha of which were accredited. In 2014, 202 varieties of potato were in seed production. In the group of vegetables, the vast majority of evaluation of seed in order to accredit it in the standard category was performed by those keeping the variety. In 2014, the Inspectorate officially evaluated 42 plantations, having the total area of 53.7 ha. In 2014, the Main Inspectorate of Plant Health and Seed Inspection assessed 781.8 ha of nursery material cultivation of fruit. That year was characterised by a small growth trend in accredited area of nursery material cultivation – by 8.1%. The largest area among the assessed types of nursery material is occupied by nurseries of fruit trees – 329.3 ha, which constitutes 42.1% of the entire accredited nursery cultivation area. Every year, apple trees constitute of nursery material production of fruit and, similarly as in the previous year, they accounted for 82.4% of all accredited fruit trees. Increased production of nursery material of fruit

was also observed in the case of suppliers producing this material in the category CAC. In 2014, nearly 24.5 million pcs. of blueberry shrubs were produced, which constitutes a 24.5% increase as compared to the previous year.
With regard to laboratory assessment in 2014, laboratories and seeds assessment laboratories of Province Inspectorates of Plant Health and Seed Inspection (official laboratories) assessed a total of 33 566 samples of seed material. In total, 9328 batches of seed were assessed, weighting 214 960 tons. The participation of accredited laboratories in the assessment of seed material of agricultural crops was similar to that observed in the previous year. 31 laboratories of seed entrepreneurs were accredited to conduct laboratory assessment, and they assessed 7718 batches of agricultural crops with the weight of 172 792.7 tons.
With regard to the supervision of entrepreneurs authorised to print official labels, PIORiN conducted 109 inspections of 64 entrepreneurs authorised to print official labels.
At the end of 2014, the Inspectorate entered to the register 5521 entrepreneurs selling seed material, 340 farmers and 6663 suppliers.
PIORiN conducted 10 218 inspections of 8055 entities conducting trade of seed material.
As part of the new task, supervision of the ban on using maize seed of the varieties MON810, 9135 maize farms were inspected, which constitutes 5% of the number of farms with the total area of 138 952 ha (20% of the total area of maize cultivations) As part of the inspections, 675 samples of plant material were collected at the inspected plantation and sent to the Laboratory. The conducted inspections of use of maize seed did not confirm that genetically modified maize MON810 was cultivated Poland.
As one of the bodies in system of supervision, control and certification within the scope of plant production in organic farming, PIORiN maintains a list of seed material, seeds and vegetable planting material produced using ecological methods, as well as a list of suppliers of organic seed material. The Main Inspector of the State Plant Health and Seed Inspection Service issued 56 decisions concerning registration in the "List of seed material, seeds and vegetable planting material produced using ecological methods", and 3 decisions of a second instance authority on granting permits for application of seed not manufactured using ecological methods in organic farming.
In 2014, in the "List of seed material, seeds and vegetable planting material produced using ecological methods", seed material and seeds were available for 100 arable plant species.
The year 2014, as compared to the previous year, brought about a decrease in the interest in obtaining permits for application of seed not manufactured using ecological methods in organic farming. Province Inspectorates issued a total of 3247 decision in this case, granting 7122 permits, 3597 of which concerned agricultural cultivations, 982 – nursery material of fruit, 2032 – vegetables, and 511 – other species (herbs, spices, medicinal and decorative plants). In 654 cases, the permit was not granted.
In 2014, inspections of grapevine cultivations were conducted on 78 farms, with the total area of crops amounting to 146.8 ha.

Laboratory activities of the Inspectorate

Laboratory diagnostics is an inseparable element of plant health supervision. The results of laboratory tests constitute, among others, the basis for undertaking administrative decisions with regard to eradication of harmful organisms subject to the obligation of eradication and disqualification of seed material.
The structure of the diagnostic networks of PIORiN includes:

- Central Laboratory of the Main Inspectorate of Plant and Seed Protection, including:
  - Phytosanitary Diagnosis Laboratory,
  - GMO Research Laboratory,
  - Laboratory for Research of Residues of Plant Protection Products,
- Province Laboratories (phytosanitary and seed assessment laboratories).

PIORiN phytosanitary laboratories perform tests on samples of plants, plant products, objects and growing media for the presence of harmful organisms originating from a batch of imported material, intended for internal trade

and for export, including assessment of seed potatoes and nursery material of fruit trees. Every year, the Inspectorate laboratories analyse ca. 160 000 plant samples, performing ca. 200 000 laboratory analyses for the presence of harmful organisms. The majority of the completed analyses are tests of soil for the presence of potato cyst nematodes from the genus Globodera (ca. 40 000 samples), for the presence of Synchytrium endobioticum spores (ca. 40 000 samples), as well as analyses of potato tubers for the presence of bacteria: *Clavibacter michiganensis* ssp. *sepedonicus* (ca. 17 000 samples) and *Ralstonia solanacearum* (ca. 17 000 samples). Furthermore, numerous tests are performed on propagating material of fruit trees for the presence of Plum pox virus, PPV (ca. 20 000 samples) and Apple proliferation phytoplasm, ApMLO (ca. 2500 samples).

The tests are conducted on the basis of internationally acknowledged procedures, consistent with the guidelines of the European Union, recommendations of the European and Mediterranean Plant Protection Organisation (EPPO), as well as the International seed Testing Association (ISTA). The laboratories have a well qualified staff of specialists, and along with the progress of diagnostic techniques, new research methods are introduced, with particular focus on molecular biology technologies. This allows for continuous improvement in research procedures, and hence ensuring high standard of the provided services.

In order to ensure the proper level of diagnostics, the activities of the Province Laboratories are coordinated and supervised by the GIORiN Central Laboratory, acting as a reference entity. Within its supervision function, the Central Laboratory is responsible for:

1) developing and implementation of uniform diagnostic protocols that are to be applied in the diagnostic networks laboratories of PIORiN, as well as supervision of their correct use;
2) development of other guidelines, instructions and recommendations for the subordinate units;
3) verification of test results obtained in the Province Laboratories, also in the case of appeals and returns of the exported plant material;
4) consulting and current briefing of employees of the Inspectorate's diagnostic network laboratories;
5) organising and conducting trainings for the Inspectorate's personnel;
6) conducting periodical inspections of the Province Laboratories operations;
7) organising and administering inter-laboratory comparisons in order to assess the proficiency of laboratories, as well as validate the testing methods.

Apart from the internal competence monitoring, the laboratories also participate in international proficiency tests, such as FAPAS – Food Analysis Performance Assessment Scheme.

Most phytosanitary laboratories operate on the basis of the implemented laboratory management system and obtained accreditation for compliance with the international standard PN-EN ISO/IEC 17025:2005 "General requirements concerning competences of research and calibration laboratories". Currently, 13 PIORiN laboratories have the accreditation certificate, issued by the Polish Accreditation Center (PCA), including the Province Laboratories in: Poznań, Koszalin, Rzeszów, Katowice, Warsaw, Olsztyn, Elbląg, Bydgoszcz, Białystok, Lublin, Radzyń Podlaski and Cracow, as well as the GIORiN Central Laboratory in Toruń. The scope of labora-

tory accreditation includes methods widely used in connection with the statutory activities of PIORiN and is gradually expanded.
The tasks of the GMO Research Facility of the Central Laboratory include analyses of plant material with regard to detection and identification of genetically modified organisms (GMO), as well as determination of percentage content of a transformation event in the sample. The analyses are conducted on the basis of standardised methods or methods recommended by the EU Reference Laboratory for genetically modified food and feed (Joint Research Centre, Ispra, Italy) and ISTA. With regard to qualitative and quantitative determination of genetic modifications, molecular techniques are used – Polymerase Chain Reaction (PCR), as well as Real-Time PCR. GMO RF conducts analyses of conventional seed material available on the domestic market, originating from Poland, other European Union member states and third countries. The monitoring covers maize and rape seed material, as they are species frequently subjected to genetic modifications, and, at the same time, are of high economic significance in Poland and are approved for seed production. Furthermore, official tests are conducted in connection with a ban on the use of maize seed MON810.
The task of the Research Facility for Residues of Plant Protection Products is to detect residues of plant protection products in plant material. The subject of testing consists of crops produced in Poland, mainly fruit and vegetables. The tests aim at verifying whether plant protection products are used correctly. The RPPP RF identifies trace residues of active substances of plant protection products with the use of such techniques as: gas chromatography, fluid chromatography and spectrophotometry. The tests make use of multi-residue methods of determination of residues of plant protection products based on modern techniques of preparation of samples for analysis.

National action plan to reduce the risk associated with the use of plant protection products

Pursuant to the provisions of Article 4 of the Directive 2009/128/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for Community action to achieve the sustainable use of pesticides (Official Journal of the EU L 309 of 24.11.2009, page 71), the European Union member states are required to adopt National Action Plans to set up their objectives, measures and timetables to reduce risks of pesticide use.
The provisions of the Directive 2009/128/EC are transposed into the national law by the regulations of the Act of 8 March 2013 on Plant Protection Products (Journal of Laws, item 455). Article 47 of this Act imposed on the minister competent for agriculture the obligation to prepare *the National Action Plan to reduce the risk associated with the use of plant protection products*. Therefore, on 6 May 2013, *the National Action Plan* was adopted by the Minister of Agriculture and Rural Development and announced in the Official Journal of the Republic of Poland Monitor Polski (M. P. item 536).
The primary purpose of the National Action Plan to reduce the risk associated with the use of plant protection products is to disseminate the principles of integrated plant protection, as well as prevent the hazards associated with the use of these products.
In connection with execution of the abovementioned objectives, integrated plant protection was promoted, and actions were implemented aiming at dissemination of knowledge on safe use of plant protection products. These activities were focused on development of consulting services within the scope of plant protection and providing agricultural producers with access to tools necessary to implement the principles of integrated plant protection. For this purpose, the Ministry established on its website a platform devoted to integrated plant protection, which contains the methodology of integrated plant protection. By the end of 2014, 54 methodologies were posted there, concerning agricultural plant species, vegetables, fruit and special plants, edible mushrooms, as well as forests. In addition, 4 trainings for advisors were organised, which were completed by 363 persons. Moreover, a series of free training courses was launched, entitled *Integrated plant production* and *Use of plant protection products taking account of the principles of integrated plant protection,* which was planned for implementation in the years 2014-2015 under the RDP 2007-2013 *Vocational training for persons employed in agriculture and forestry.* As a result, 5000 people will be trained in integrated plant production, and 50 000 people in integrated plant protection.

It should be emphasised that the use of advanced decision support systems in plant protection constitutes an important element of monitoring of harmful organisms and signalling their presence. Such systems allow for limiting the number of plant protection procedures, at the same time securing effective protection of arable crops, which contributes to increasing the safety of crop consumers and the environment, as well as reduction in production costs. In 2014, works were conducted on adaptation and propagation of support programmes for decisions related to protection of potato, winter barley, winter wheat, and sugar beet. These measures constitute an element of the multi-annual programme of the National Research Institute of Plant Protection implemented for the Ministry of Agriculture and Rural Development in the period of 2011-2015.

Consulting for implementation of the agricultural policy

The agricultural advisory system in Poland

The agricultural advisory system in Poland is composed of agricultural advisory units, agricultural chambers and private advisory entities.

According to the Act of 22 October 2004 establishing units for agricultural advice (Journal of Laws Dz.U. of 2013, item 474), Poland has 16 voivodship agricultural advisory centres (ODRs), supervised by locally competent province authorities and the Agricultural Advisory Centre in Brwinów (CDR), which is controlled and supervised by the Minister of Agriculture and Rural Development. The most important tasks of ODRs include carrying out educational, information and popularisation activities among farmers and rural inhabitants, including activities concerning the Common Agricultural Policy. Furthermore, these institutions prepare agricultural and food products market analyses and agricultural inputs analyses, as well as collect and popularise market information in this scope. They can conduct variety experiments as part of post-registration variety experimentation, undertake actions to preserve cultural and natural heritage of rural areas, as well as promote environmentally friendly lifestyle. The tasks of CDR mainly involve professional trainings for agricultural advisors, certification of advisors and keeping lists of certified advisors, who are authorised to provide advisory services under the Rural Areas Development Programme. ODRs employ a total of 4 163 persons, while the CDR – 198 (data as at 31.XII.2014). Each ODR issues its own journal for farmers (monthly), while the Agricultural Advisory Centre – a quarterly journal for advisors agricultural, entitled. "Issues of Agricultural Advisory Service" ("Zagadnienia Doradztwa Rolniczego"), which the Ministry of Science and Higher Education assigned to the group of scientific magazines with a high score.

The Act created a legal personality for the agricultural advisory units. As a result, they can manage their own finances and collect fees for certain services – e.g. for filling in applications or other documents necessary to apply for financial aid co-financed from the EU funds or other national and foreign institutions.

Agricultural consulting in agricultural chambers is executed on the basis of Article 5 passage 1 point 6 of the Act of 14 December 1995 on Agricultural Chambers (Journal of Laws Dz. U. of 2014, item 1079). Agricultural chambers provide advisory services free of charge.

Private advisory entities operate by virtue of the Act of 2.07.2004 on Freedom of Economic Activity (Journal of Laws Dz.U. of 2013, item 672).

Since 2007, the European Union has imposed on each member state the obligation to provide advisory services to farmers. The present guidelines, concerning the functioning of the agricultural advisory system, are contained in the Regulation of the European Parliament and the European Council (EU) No. 1306/2013 of 17 December 2013 on the financing, management and monitoring of the common agricultural policy and repealing Council Regulations (EEC) No. 352/78, (EC) No. 165/94, (EC) No. 2799/98, (EC) No. 814/2000, (EC) No. 1290/2005 and (EC) No. 485/2008 (Official Journal of The EU L 347, page 549), while the Regulation of the European Parliament and of the Council (EU) No. 1305/2013 of 17 December 2013 on support for rural development by the European Agricultural Fund for Rural Development (EAFRD) and repealing the Council Regulation (EC) No. 1698/2005 defines the minimum tasks and the way of supporting the advisory service system as part of the measure *Advisory services, farm manage-*

ment and farm relief services, covered by the Rural Development Programme for the years 2014-2020. Regulations regarding provision of advisory services to farmers under the RDP 2014-2020 in Poland were specified in the Act of 20 February 2015 on support for rural development with the participation of the European Agricultural Fund for Rural Development in the framework of the Rural Areas Development Programme for 2014-2020 (Journal of Laws Dz.U. of 2015, item 349). The provisions set out in section 7 of the Act are intended to provide high-quality advisory services, financed from the public funds from the EU. According to Article 51, only persons entered in the lists of advisors kept by the CDR will be able to provide advisory services to farmers in the scope covered by the RDP 2014-2020.

The CDR keeps the following lists of advisors:

- agricultural,
- agri-environmental,
- natural experts,
- forest advisors.

Entry into the list of advisors can be granted only to persons, who:

- have not been sentenced by a final court judgment for an intentional offence or an intentional fiscal offence;
- have suitable educational background (higher agricultural education in the case of agricultural and agri-environmental advisors, higher education in natural sciences in the case of natural experts, higher or secondary education in forestry in the case of forest advisors), and in the case of agricultural, agri-environmental and forest advisors – one year of experience in provision of advisory services;
- have completed a relevant training course and passed the examination.

At the same time, on the basis of the transitional provisions, persons entered into the advisors lists kept by the CDR for the purposes of the RDP 2007-2013, are deemed to be entered in the advisors lists for the purposes of the RDP 2014-2020.

Network for innovations in agriculture and rural areas

In order to ensure effective dissemination of knowledge and experience in implementing innovations in agriculture and rural areas, this year, as part of the National Rural Network (NRN), the Network for Innovation in Agriculture and Rural Areas (SIR) is being created. The coordinator of SIR, in accordance with the regulations of the Act on support for rural development with the participation of the European Agricultural Fund for Rural Development in the framework of the Rural Areas Development Programme for 2014-2020, is the Agricultural Advisory Centre in Brwinów, while in individual provinces, the network tasks are executed by province agricultural advisory units. The network's tasks include identification of partners for cooperation in implementing innovative projects, cooperation with national scientific-research entities, institutions and organisations working on innovations, as well as with the European Innovation Network, executing activation initiatives among farmers, entrepreneurs, scientific-research entities and advisors, including transfer of information on innovative solutions, as well as consulting and assistance in the creation and organisation of operational groups for innovations.

Agricultural schools

Public agricultural schools are run by local government authorities (mainly at the district level), as well as by the Minister of Agriculture and Rural Development. The Minister of Agriculture and Rural Development currently supervises 45 agricultural school complexes, which educate more than 12 000 students, and employ ca. 1455 teachers. The teaching facilities for practical education consist of school workshops, laboratories and schools' own agricultural holdings, as well as holdings belonging to private farmers, processing plants, restaurant-hotel establishments. Schools of the Minister of Agriculture and Rural Development provide education for 25 professions,

covering such areas as: agricultural production, gardening, agricultural techniques, food processing, food services, agrobusiness, rural tourism. The majority of students receive education in the following professions: agricultural mechanisation technician – 2002, nutrition and food services technician – 1876, technician-farmer – 1420, landscaping technician – 954. Additionally, within the existing structures of the aforementioned schools complexes are 35 recurrent education centers, which organise, first of all, professional qualification courses, significantly supplementing the system of education and skill acquisition by adults.

While running agricultural schools, the Minister of Agriculture and Rural Development can directly impact the quality and effectiveness of agricultural educational, and hence create staffing policy for the agri-food sector. Agricultural schools are meant to equip their graduates with knowledge and professional skills allowing them to undertake work in the agricultural and service sector, as well as to properly compete in the conditions of free market economy, and to prepare them to continuously improve their professional qualifications. Therefore, the Ministry of Agriculture and Rural Development undertakes measures aimed at transforming the subordinate schools into modern education centres – agricultural education centres, having good teaching equipment and adequately prepared teaching staff, educating in various professions, depending on the needs of the agri-food sector, broadly influencing the environment through organisation of various forms of education addressed to the youth, as well as to the adult rural areas inhabitants. In order to fully implement the adopted assumptions, the Ministry of Agriculture and Rural Development undertakes measures with regard to: modifications of majors and the content of education, adjusting it to the changing conditions of production and life in the countryside, popularisation of modular education, preparation and training of vocational teachers (the major role in this respect is played by the teacher training centre administered by the Ministry of Agriculture and Rural Development – the National Centre for Agricultural Education in Brwinów), as well as providing agricultural schools with the proper facilities for practical education.

Furthermore, in 2014, the School Complexes of the Agricultural Education Centre administered by the Minister of Agriculture and Rural Development implemented 50 projects as part of the following EU programmes:

- Human Capital Operational Programme (HCOP),
- Leonardo da Vinci (LdV),
- Comenius (COM),

- Erasmus PLUS (ERASMUS+),
- Operational Programme Knowledge Education Development (OP KED).

While promoting an innovative approach to education and vocational trainings under the programmes Leonardo da Vinci and Comenius, the schools implemented 10 projects, with the total value of 634 057 EURO. As a result, cooperation was established with partners from 11 EU member states (Germany, Turkey, Austria, Hungary, France, Denmark, Cyprus, Italy, Lithuania, Spain, the UK). As part of the implemented projects, students had the opportunity to participate in numerous internships, apprenticeships, courses and trainings, thanks to which they were able to deepen their knowledge of specific domains so as to increase their chances of success on the demanding labour market within the EU.

In 2014, the schools also implemented 34 projects under the HCOP, for the total amount of 78 862 819.70 PLN, which increased the quality of education and modernised the educational facilities. The result of implementation of these projects include, among others, expansion of the educational offer, creation of professional workrooms and rooms for practical profession teaching, equipping with machines and devices, construction of sport halls and school workshops, organisation of numerous vocational and language courses and trainings, as well as classes on general subjects, and establishment of cooperation with entrepreneurs, enabling participation in internships and apprenticeships.

In connection with the beginning of the new financial perspective, the agricultural schools of the Minister of Agriculture and Rural Development commenced in 2014 implementation of 3 projects under the programme ERASMUS+ and the Operational Programme Knowledge Education Development "OP KED", for the total amount of 49 527 EURO.

ERASMUS+ is a EU programme focusing on education, trainings for the youth and sport in Europe, planned for 2014-2020. The Erasmus+ Programme was developed so as to support the efforts of countries participating in the programme for effective use of the potential of human skills and social capital of Europe, while at the same time reaffirming the principle of lifelong learning by combining support for formal, non-formal and informal learning in the scope of education, training and sport. The programme also increases the capacity in cooperation and mobility regarding partner countries, above all, in the field of higher education and the youth.

According to one of the new elements introduced in the Treaty of Lisbon, Erasmus+ supports actions aimed at developing the European dimension of sport by promoting collaboration between authorities responsible for sports.

The Operational Programme Knowledge Education Development "OP KED" is an answer to the challenges and, at the same time, an instrument for the implementation of the Europe 2020 Strategy. It takes account of the long-term challenges Europe is facing, related to globalisation, economic development, quality of public policies, demographic phenomena, as well as investments in human capital.

Map 4. Agricultural schools administered and supervised by the Minister of Agriculture and Rural Development

Source: MARD.

ADDRESSES OF ENTITIES RELATED TO AGRICULTURE

MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT (MARD)
00-930 Warsaw, ul. Wspólna 30
phone + 48 22 623 10 00;
fax + 48 22 623 27 50
http://www.minrol.gov.pl
e-mail: kancelaria@minrol.gov.pl

AGRICULTURAL MARKET AGENCY (AMA)
01-207 Warsaw, ul. Karolkowa 30
phone/fax + 48 22 661 72 72/ + 48 22 628 93 53
http://www.arr.gov.pl
e-mail: tpi@arr.gov.pl

AGENCY FOR RESTRUCTURING AND MODERNISATION OF AGRICULTURE (ARMA)
02-822 Warsaw, ul. Poleczki 33
tel. 800 380 084
fax + 48 22 318 53 30
http://www.arimr.gov.pl
e-mail: info@arimr.gov.pl

AGRICULTURAL PROPERTY AGENCY (APA)
00-215 Warsaw, ul. Dolańskiego 2
phone/fax + 48 22 635 80 09/ + 48 22 635 00 60
http://www.nor .gov.pl
e-mail: anr@anr.gov.pl

FOUNDATION OF ASSISTANCE PROGRAMMES FOR AGRICULTURE (FAPA)
00-930 Warsaw, ul. Wspólna 30
phone/fax + 48 22 623 16 03/ + 48 22 623 19 09
http://www.fapa.com.pl
e-mail: fapa@fapa.com.pl

AGRICULTURAL SOCIAL INSURANCE FUND (KRUS)
00-608 Warsaw, Al. Niepodległości 190
phone/fax + 48 22 592 65 90/ + 48 22 825 95 97
http://www.krus.gov.pl
e-mail: centrala@krus.gov.pl

AGRICULTURAL AND FOOD QUALITY INSPECTION (IJHARS)
00-930 Warsaw, ul. Wspólna 30
phone /fax + 48 22 623 29 00/ + 48 22 623 29 98
http://www.ijhar-s.gov.pl
e-mail: sekretariat@ijhar-s.gov.pl

VETERINARY INSPECTORATE – GENERAL VETERINARY INSPECTORATE (GIW)
00-930 Warsaw, ul. Wspólna 30
phone/fax + 48 22 623 20 88/ + 48 22 623 14 08
http://www.wetgiw.gov.pl
e-mail: wet@wetgiw.gov.pl

MAIN INSPECTORATE OF PLANT HEALTH AND SEED INSPECTION (PIORiN)
00-930 Warsaw, ul. Wspólna 30
phone/fax + 48 22 623 23 02/ + 48 22 623 23 04
http://www.piorin.gov.pl
e-mail: gi@piorin.gov.pl

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phone/fax + 48 22 729 66 34 (38)/ + 48 22 729 72 91
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NATIONAL COUNCIL OF AGRICULTURAL CHAMBERS
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NATIONAL UNION OF FARMERS, FARMER ASSOCIATIONS AND ORGANISATIONS
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