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Changes in Polish Agriculture

Challenges facing the fertilisers industry in the context of changes in agriculture in Europe and worldwide

19TH IFMA CONGRESS
Warsaw, July 26th 2013

Which farming model for Poland?

More efficient use of a smaller pool of funds following expected budget cuts. It remains to be decided whether to:

a) support entrepreneurship, or
b) provide subsistence for those who lag behind.

If both groups are to be supported, the question then arises of the share of funds allocated to each group

What is the spending efficiency of those funds?

- EU programmes in support of territorial cohesion **demonstrate limited efficiency** and are unable to effect change in the present framework.
- Too much focus **is placed** on **the absorption of funds**, and **less attention is** paid to **their appropriate allocation and utilisation efficiency**.

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Selected aspects of the potential of Polish agriculture compared with the European Union

In terms of land area, Poland ranks ninth in Europe. As at the end of 2010, Poland's population was 38.2 m, the eighth largest in Europe.

Poland's total area represents 7.1% of the EU's total area, while Poland' s population accounts for 8.3% of the EU's total population.

In terms or arable land area, Poland ranks third among EU countries. It is also among the four largest food producers in the EU, together with Germany, France and the United Kingdom.

Rural areas in Poland

- Rural areas in Poland are becoming less and less **agriculture-oriented**. This is manifest in various dimensions of rural life. Some **60% of the** rural population **have** no **connection with agricultural production or the use of agricultural land**.

- Only **one-third of rural residents actually live off agriculture**, either primarily or solely, **and this** figure is rapidly dwindling.

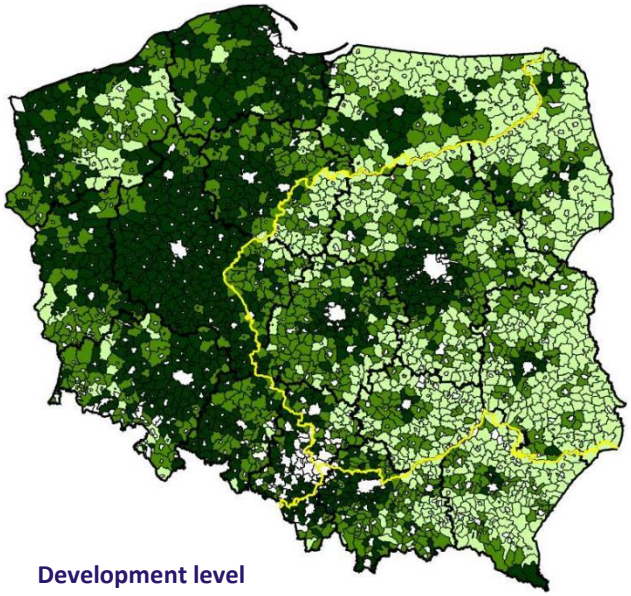
- Nevertheless, employment in agriculture remains relatively high (12.8% of the total workforce in the economy) which, combined with other characteristics of Polish agriculture, **causes** productivity in this economic sector to total **merely 30% of the average productivity in agriculture for EU-27**.

Source: www.fdpa.org.pl

93% of Poland's territory is inhabited **by nearly 40% of the population**

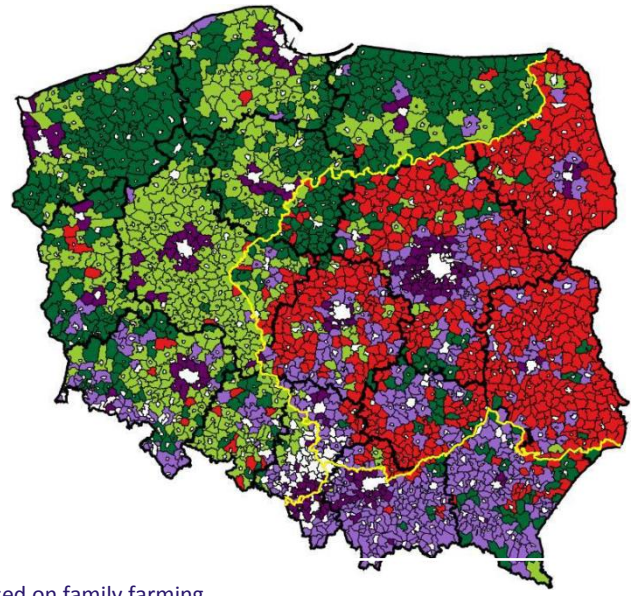
Significant regional differences:

- Historical impact - division of the country in the period of partitioning
- Effects of different mechanisms shaping agriculture after the abolition of serfdom
- Environmental reasons - geographical and agro-weather conditions



Development level

- High
- Moderate
- Low



- Single function based on family farming
- Single function after the state-owned farming period, based on large farms using hired labour
- Multiple functions resulting from urbanisation
- Multiple functions, dominated by contemporary agriculture, notably family farming
- Areas of small farms and mixed sources of income, without a clear economic focus

Source: www.fdpa.org.pl

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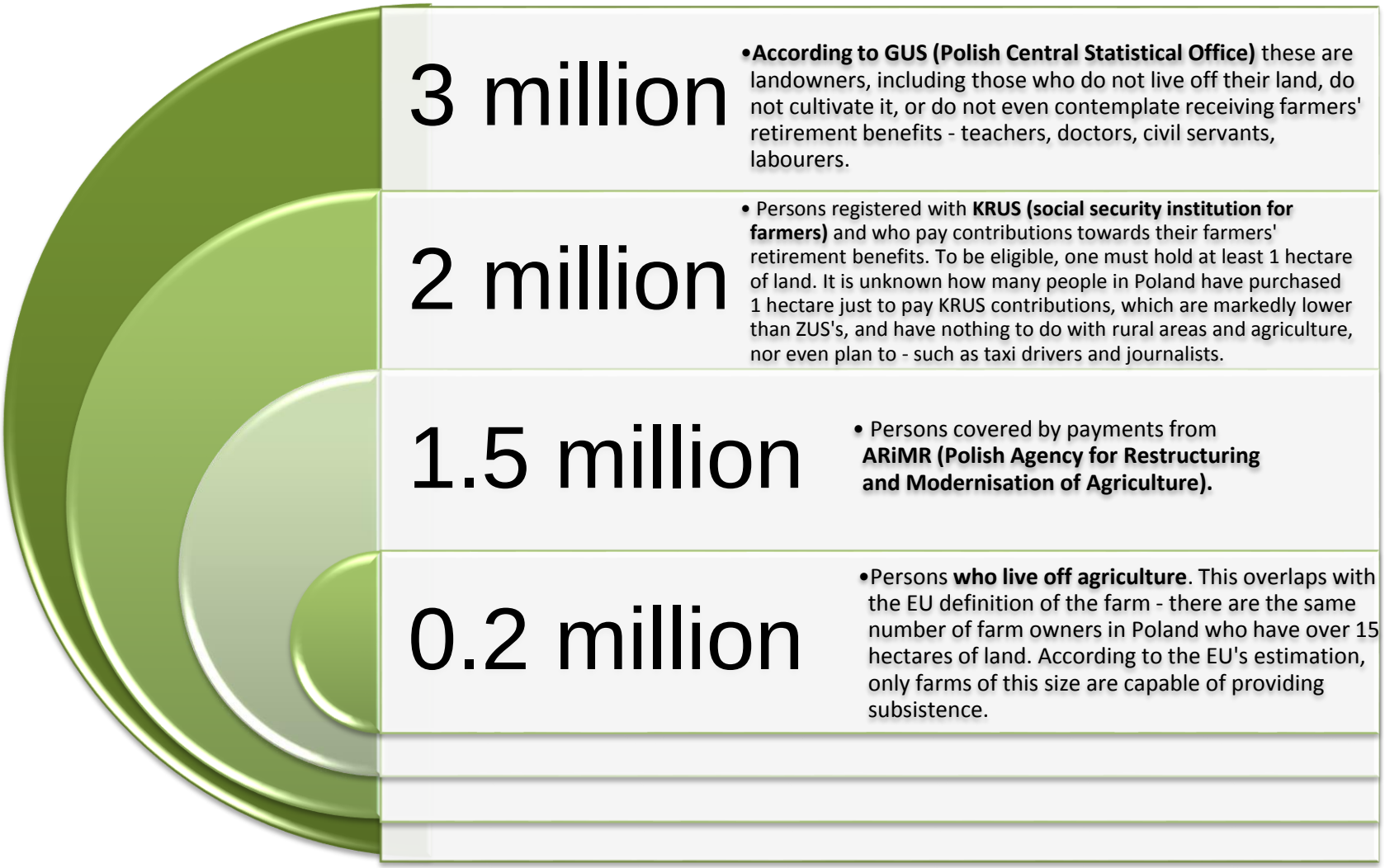
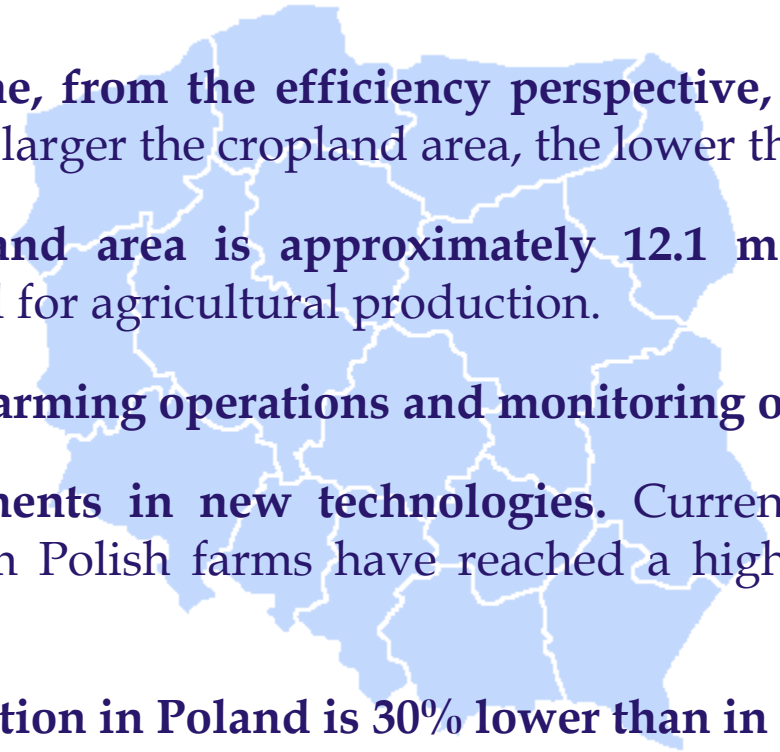
Farmers



Polish agriculture sector – opportunities and threats

- **Small average farm size –** In 2010, the average area of cropland per farm was 9.5 ha.
- **In our climate zone, from the efficiency perspective,** the optimum size of a farm is 300 ha. The larger the cropland area, the lower the unit production cost.
- **Poland's arable land area is approximately 12.1 m ha,** which represents enormous potential for agricultural production.
- **Consolidation of farming operations and monitoring of direct payment use.**
- **Necessary investments in new technologies.** Currently, as few as around 50,000 of the 1.5 m Polish farms have reached a high level of technological development.
- **Fertiliser consumption in Poland is 30% lower than in the EU-15 countries.**



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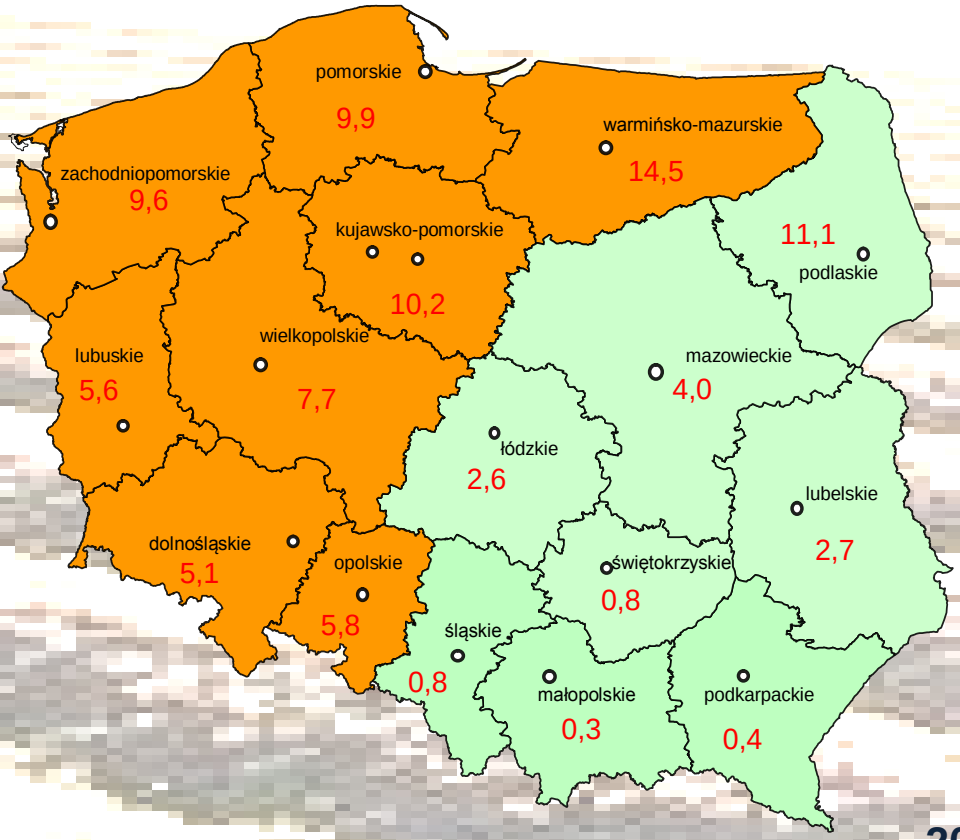
Share of agricultural farms holding more than 20 hectares of agricultural land

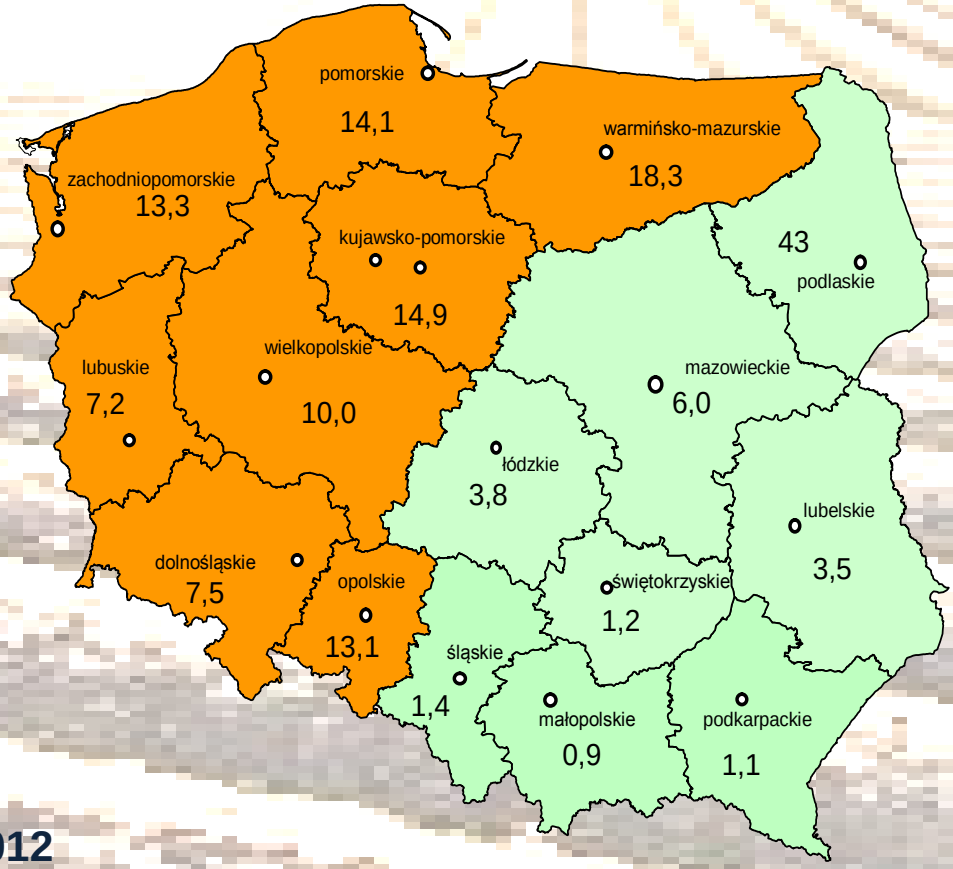
2002

POLAND - 4.0%



2011

POLAND - 5.5%



2012

31.4% of farms in the 2-5 ha range use 10.3% of total agricultural land

12.7% of farms in the 15-100 ha range use 37.1% of total agricultural land

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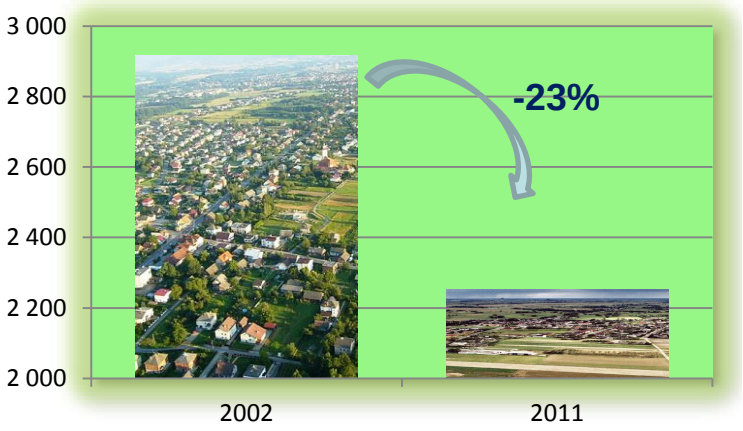
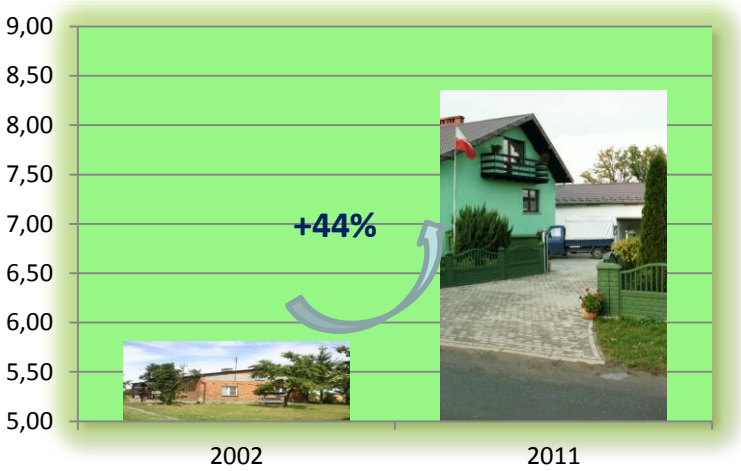
Characteristic features of farms, 2002 vs 2011

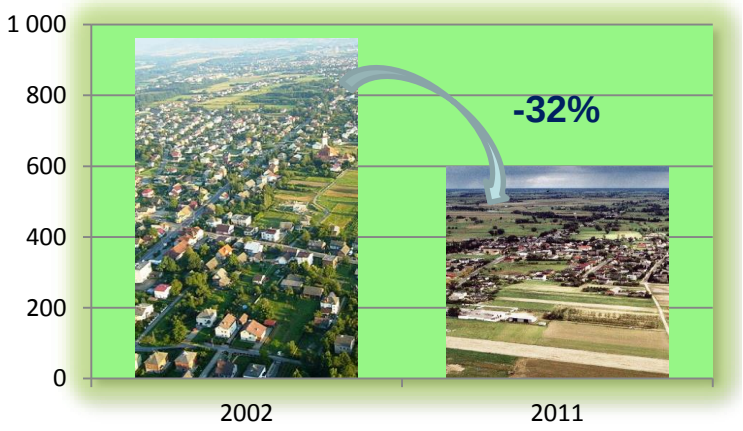
Number of agricultural farms [in thousands]



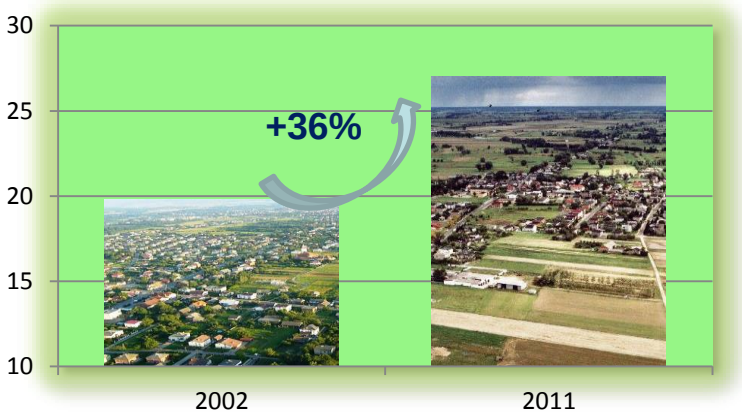
Average size of agricultural farms



Number of smallest farms [in thousands]



Number of farms of at least 50 hectares [in thousands]



Demographics and social transformation

- Polish people are increasingly more appreciative of the virtues of rural life.
- **The number** of **residents in rural areas** is on the rise. This figure has been consistently growing since 2000.
- There is a relatively **large number of young people residing in rural areas**.
- In many regions of Poland, older urban residents retire to rural areas, and younger people sometimes choose to explore new opportunities there.
- **Rural areas are becoming similar to towns in many respects**. This applies to fertility rates, birth rates, the age at which women decide to have children, infant mortality etc. The average life expectancy for residents of rural areas is also improving. In 2010, life expectancy stood at 71.4 years for men and 80.7 years for women.
- The **education level of the rural population** is improving quickly, although the share of degree holders is only one-third of that for towns.

Mentality

As recently as **2010, 82%** of farmers stated that they make decisions about their farms single-handedly. Then, in **2012, the share was only 39%!** Most then said that they consult their spouse about their decisions.

Year after year, **modern technology** is also being increasingly employed.

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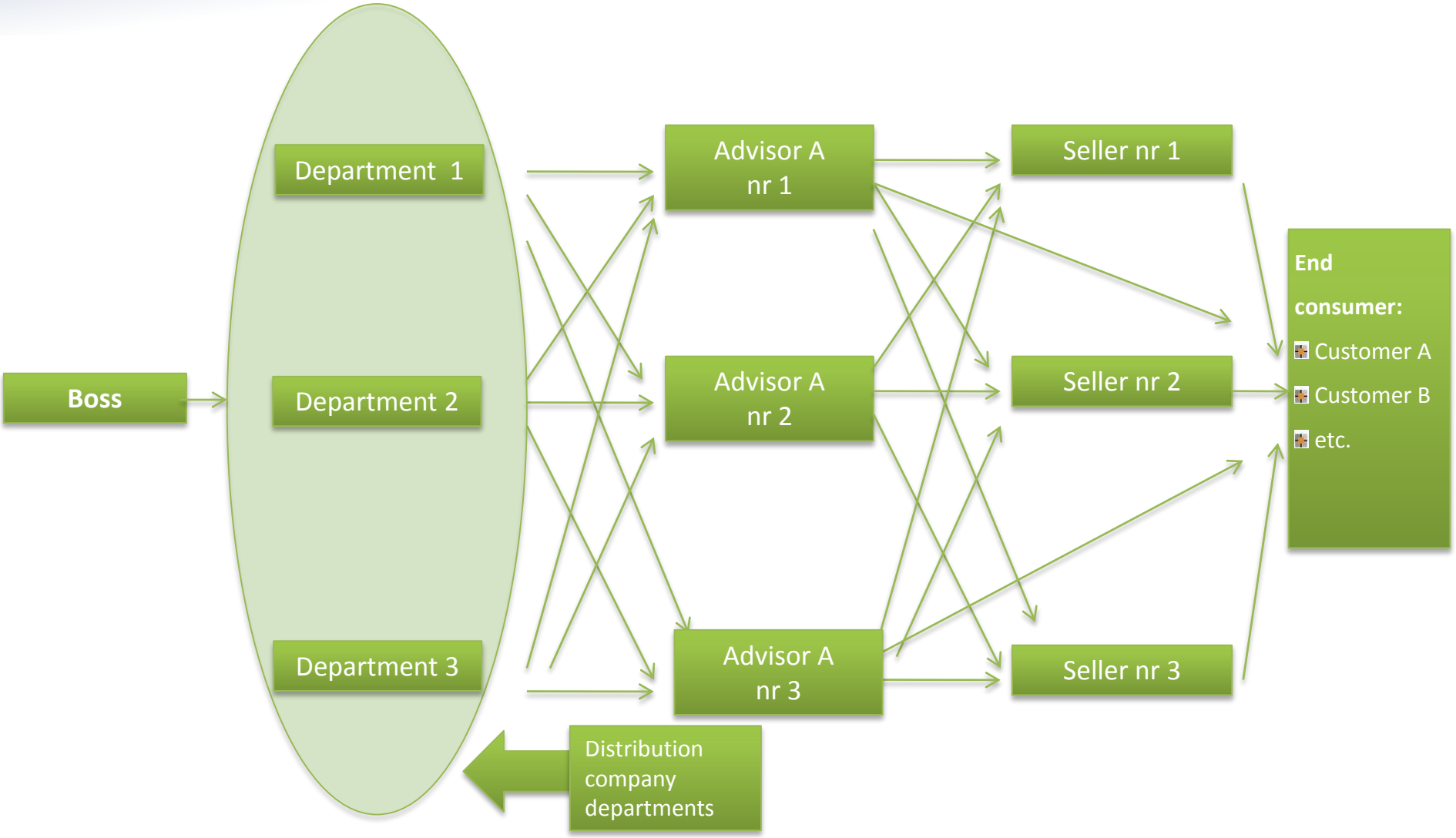
Fermer support system



„Trading in fertilisers and crop protection chemicals in sustainable agriculture”

A programme focused on issues related to fertilisation and agricultural economics,
with an emphasis on the practical use of knowledge, taking into account interpersonal techniques.

- Integrated crop production
- Plant protection consultancy
- Plant nutrition consultancy
- Agricultural economics and marketing
- Practical training in fertiliser application and plant protection

Organisation: The Faculty of Agriculture and Biology of the Warsaw University of Life Sciences

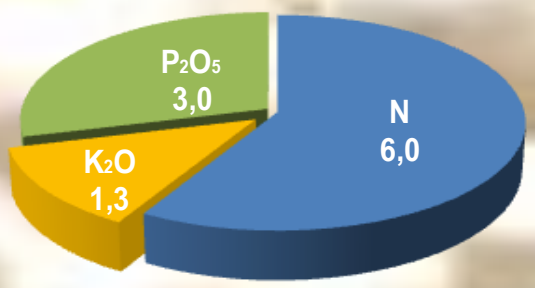
Duration: 2 semesters, 14 sessions, 220 hours

Programme graduates receive:

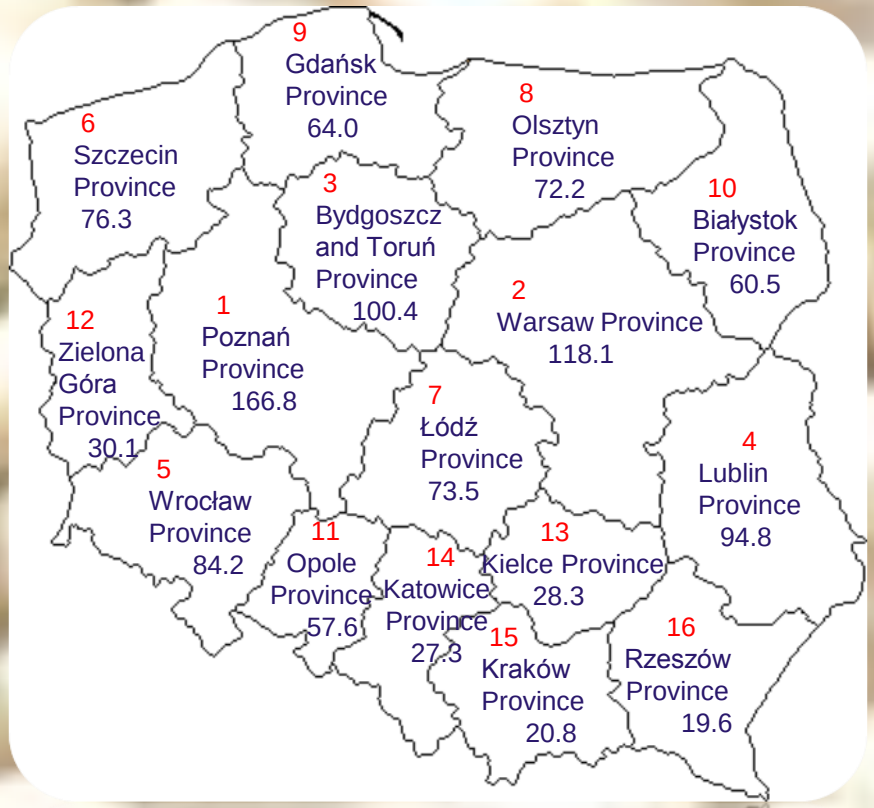
- A diploma from a reputable university – the Warsaw University of Life Sciences – and
- A certificate entitling the holder to apply and trade in plant protection products designed for professional use.

National fertilisers market

Structure of the national fertilisers market (valued at PLN 10.3 bn)



Fertiliser consumption on the national market in individual provinces, by value (2011/2012, in thousand tonnes of nitrogen)



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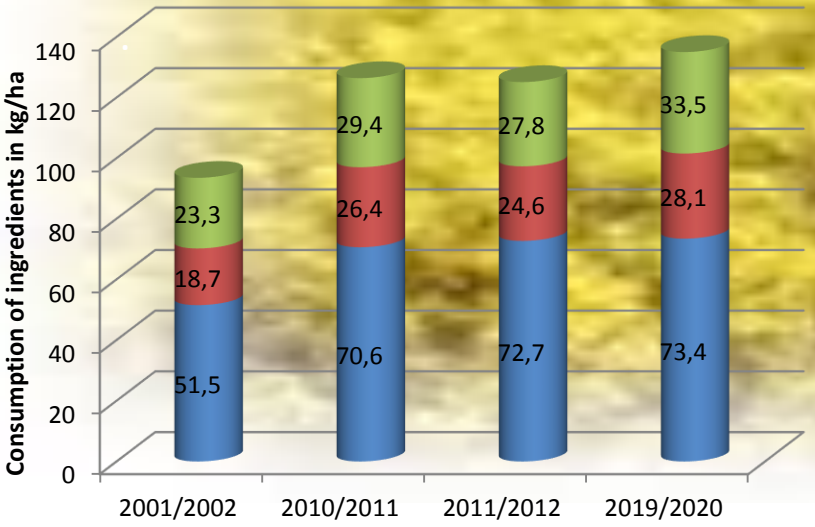
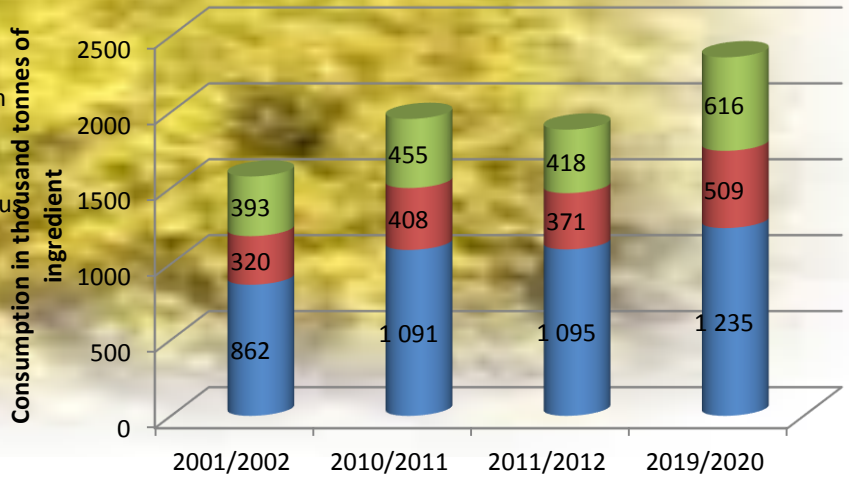
Fertiliser consumption in Poland

National consumption [in thousand tonnes of pure ingredient] Source: GUS/PIPC

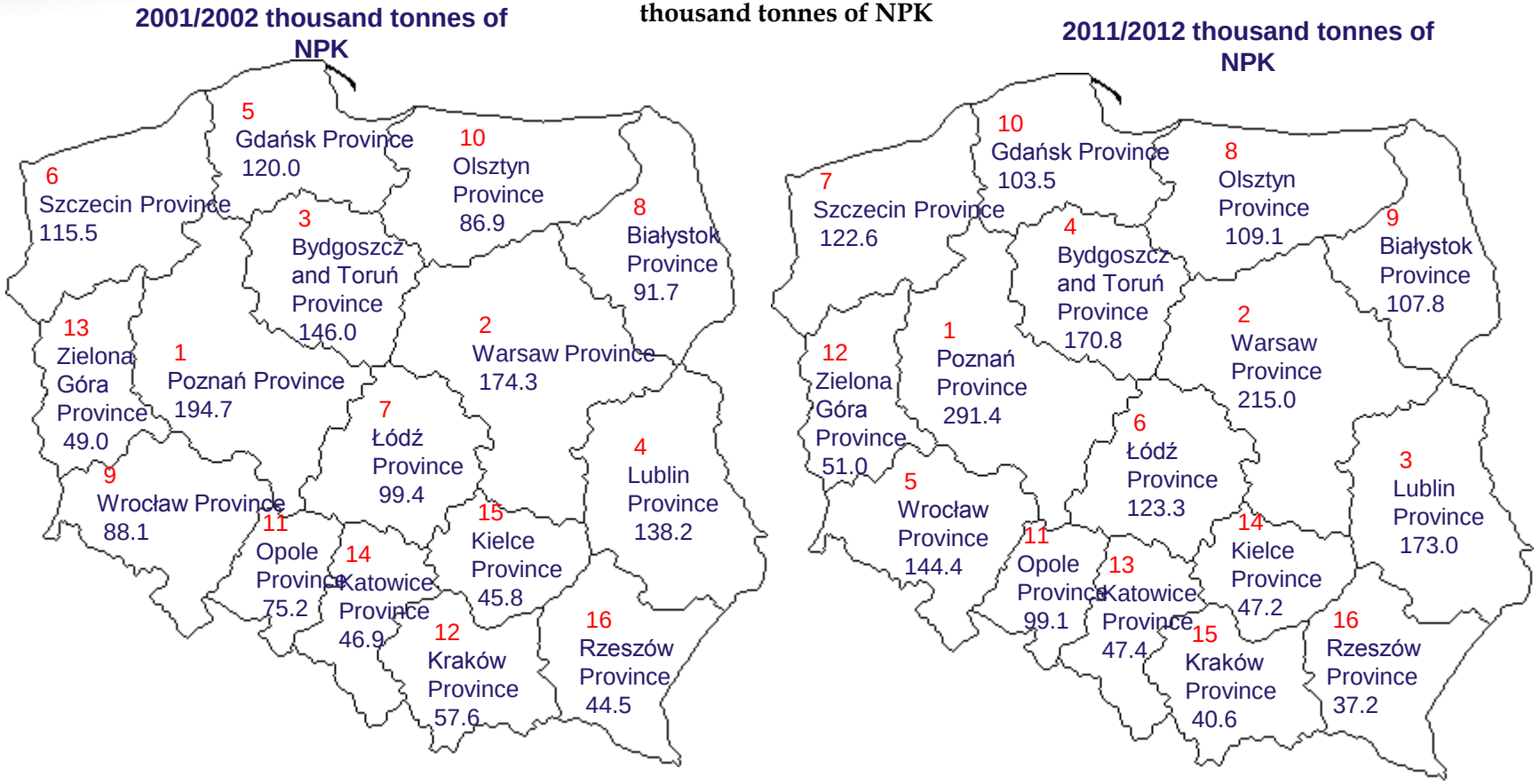
	Nitrogen fertilisers	Phosphorus fertilisers	Potassium fertilisers
2001/2002	862	320	393
2010/2011	1091	408	455
2011/2012	1094	371	418
2019/2020	1235	509	616





National fertilisers market

Regional division of fertiliser consumption on the domestic market as consumption of fertilisers converted into pure ingredient, thousand tonnes of NPK

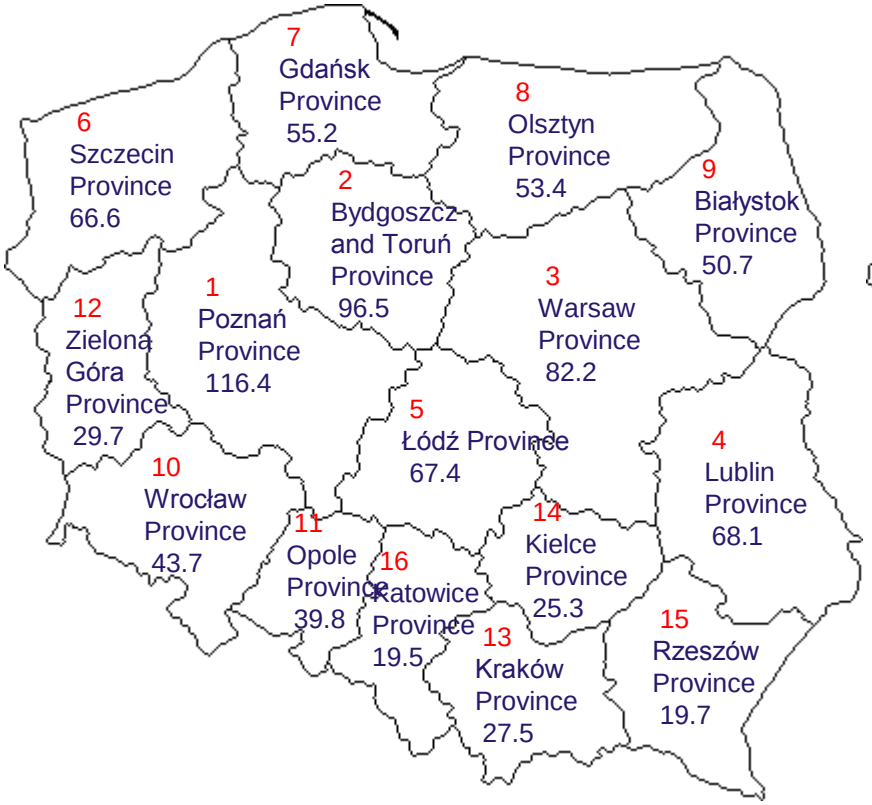


The highest consumption of mineral fertilisers over the last 10 years was recorded in the Provinces of Poznań, Warsaw, Bydgoszcz and Toruń, and Lublin. In contrast, consumption dropped significantly in the Provinces of Szczecin, Kraków and Rzeszów.

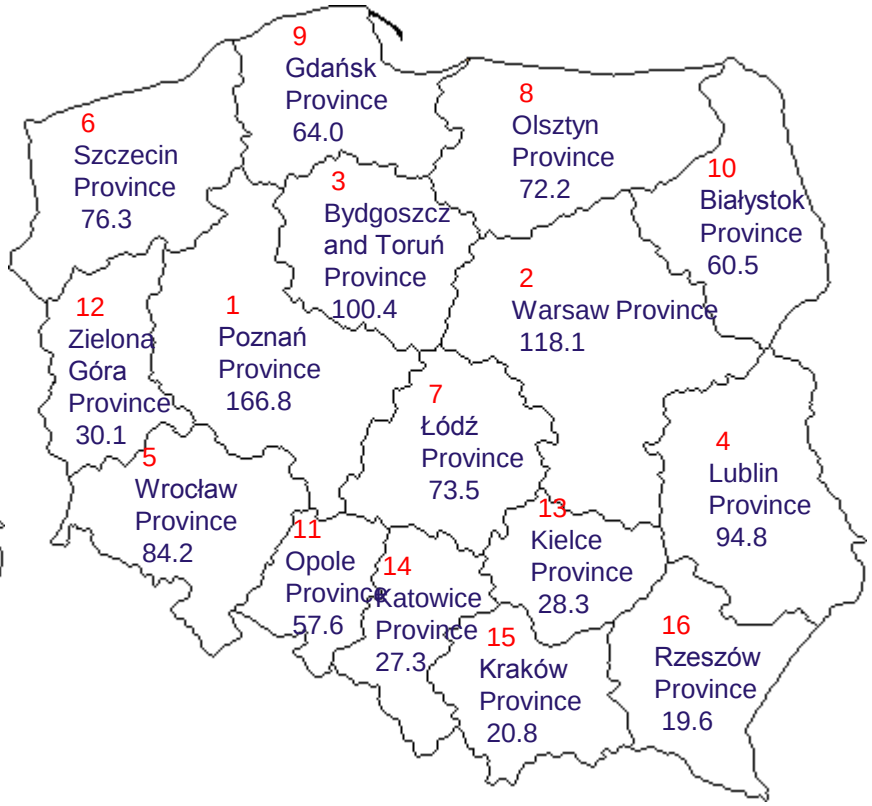
National fertilisers market

Regional division of fertiliser consumption on the domestic market as consumption of fertilisers converted into pure ingredient, thousand tonnes of N

2001/2002 thousand tonnes of N



2011/2012 thousand tonnes of N



The highest consumption of nitrogen fertilisers over the last 10 years was recorded in the Provinces of Poznań, Warsaw, Bydgoszcz and Toruń, and Lublin. Consumption dropped significantly in the Province of Kraków.

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Primary conclusions

- Despite having a relatively small share in GDP, the Polish agricultural market is a vital and important player in the European market.
- Chemical industry, including the fertiliser industry, is a decisive factor largely determining the scale of the agricultural market's development.
- Fertiliser manufacturers have realised that they must become actively involved in the decision-making processes related to market regulation.
- Highly dynamic changes are also occurring in the agricultural product distribution market in Poland, where customer service is becoming ever more professional.
- Environmental regulations regarding the EU Emissions Trading Scheme (ETS III) find reflection in the volume and price of food. The phenomenon of *carbon leakage* – involving relocation of production to countries not covered by the system – may lead to an increase in global emissions and a food shortage in the EU.

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Thank you for your attention