

POLISH BIOFUEL CHAIN AS A KEY EXAMPLE OF THE BIOECONOMY BASED ON AGRICULTURE



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***INTERNATIONAL CONFERENCE „BIOECONOMY IN AGRICULTURE”
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OUR UNDERSTANDING OF BIOFUELS...



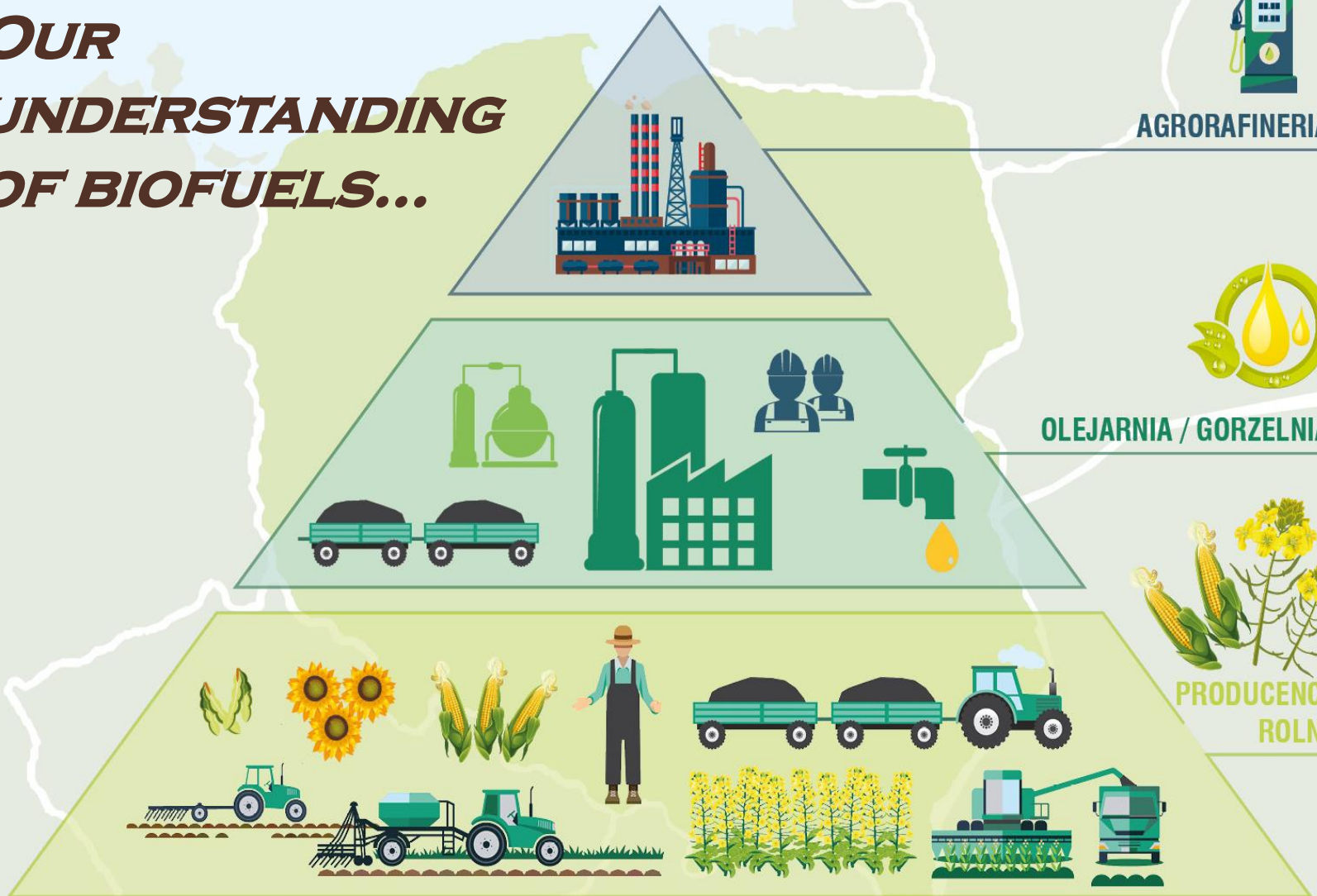
AGRORAFINERIA



OLEJARNIA / GORZELNIA



PRODUCENCI
ROLNI



Wide diversity of agricultural feedstock, multiplicity of the products



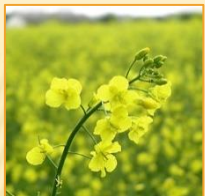
FUEL



FOOD

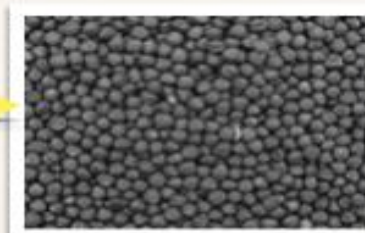


FEED



Rapeseed as a basic feedstock for Polish crushing industry

- 💧 high degree of concentration
- 💧 modern technical infrastructure



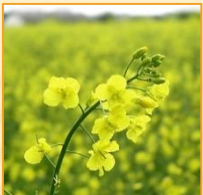
food [40%]



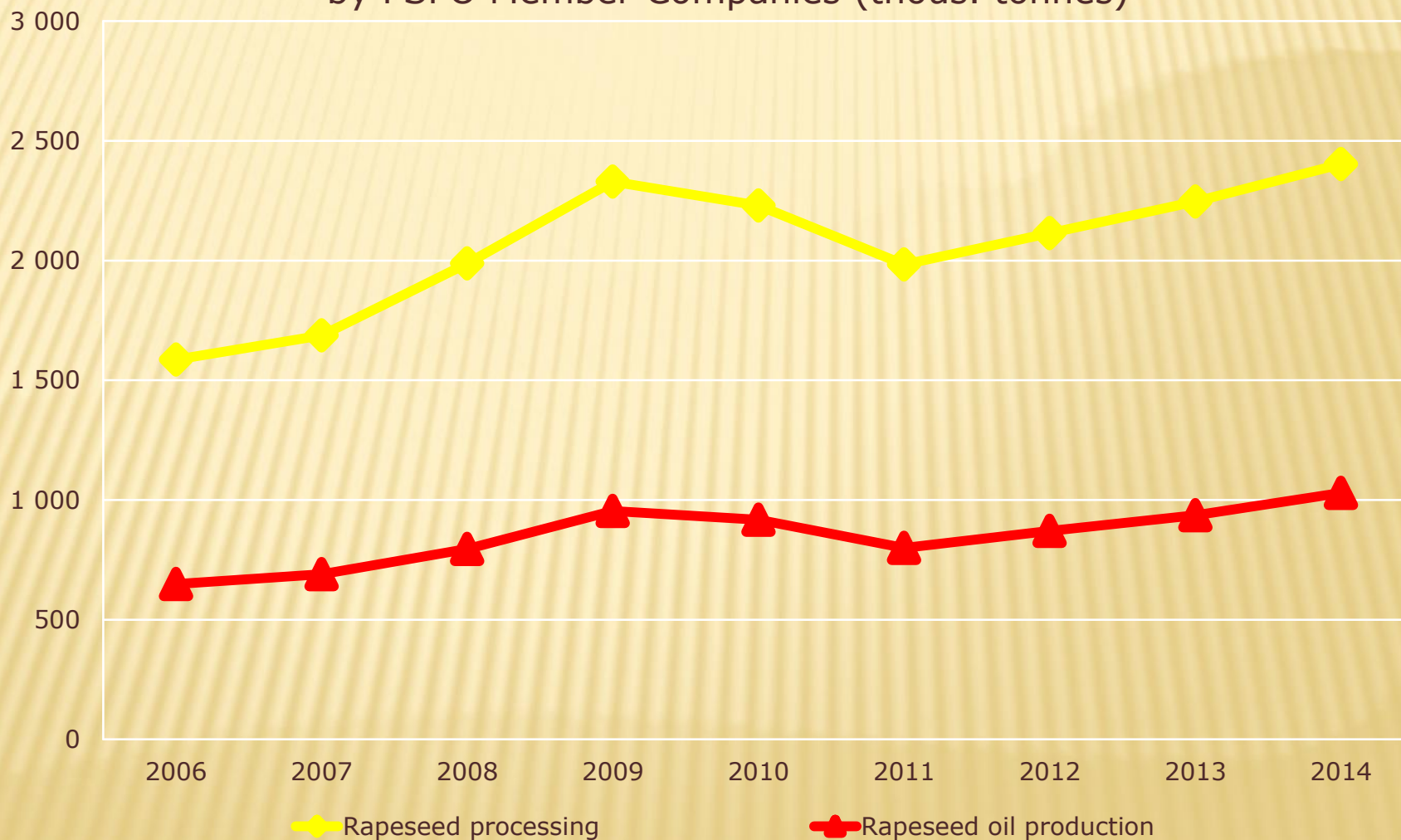
biofuels [60%]

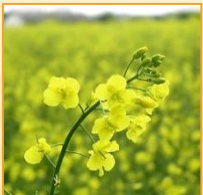


but also feed!

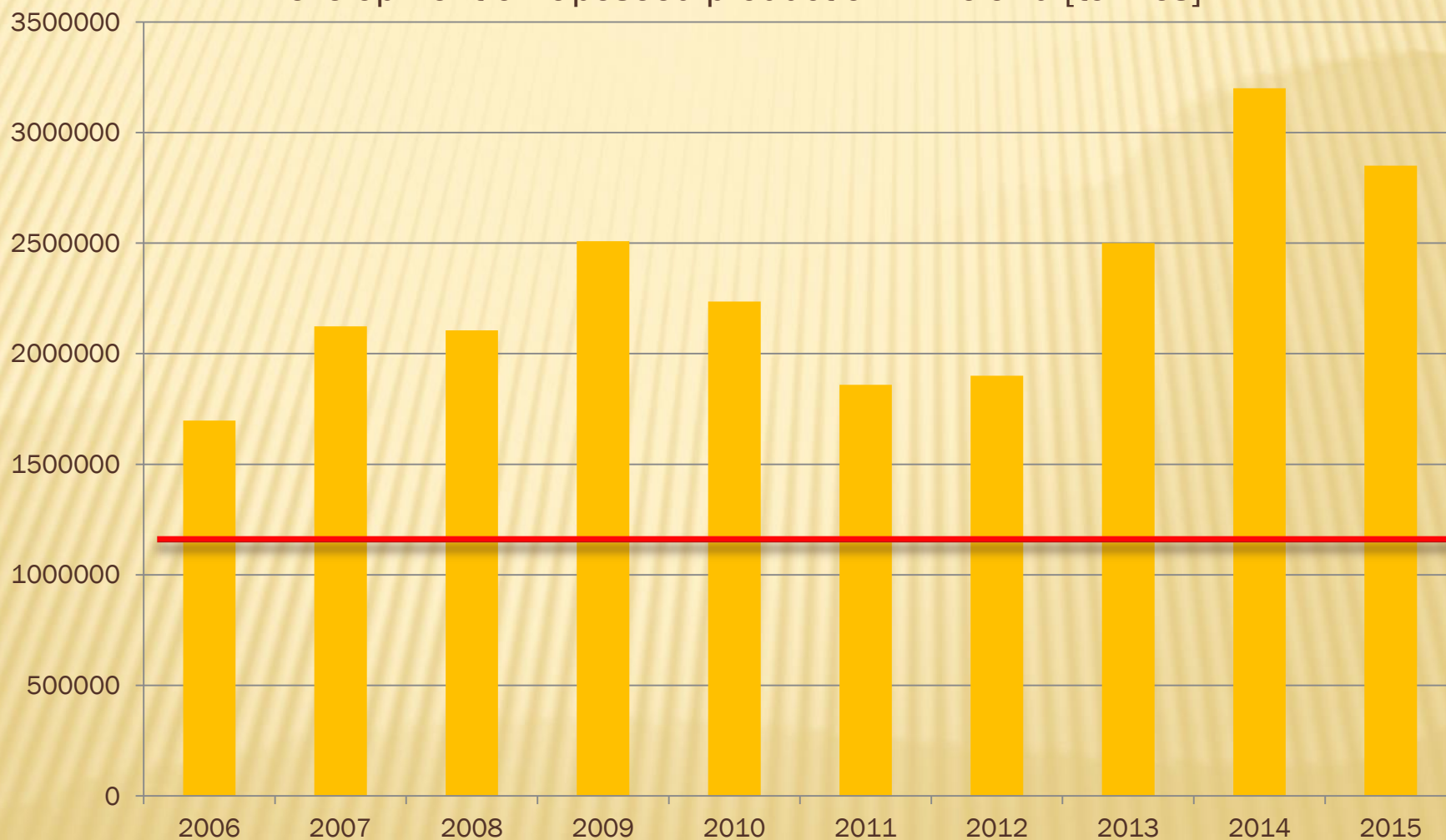


Rapeseed processing and rapeseed oil production by PSPO Member Companies (thous. tonnes)





Development of rapeseed production in Poland [tonnes]



Biofuels as a substantial part of green economy

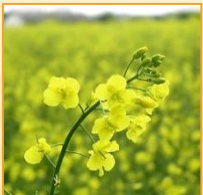


Wastes and residues as alternative feedstock



Green energy in processing

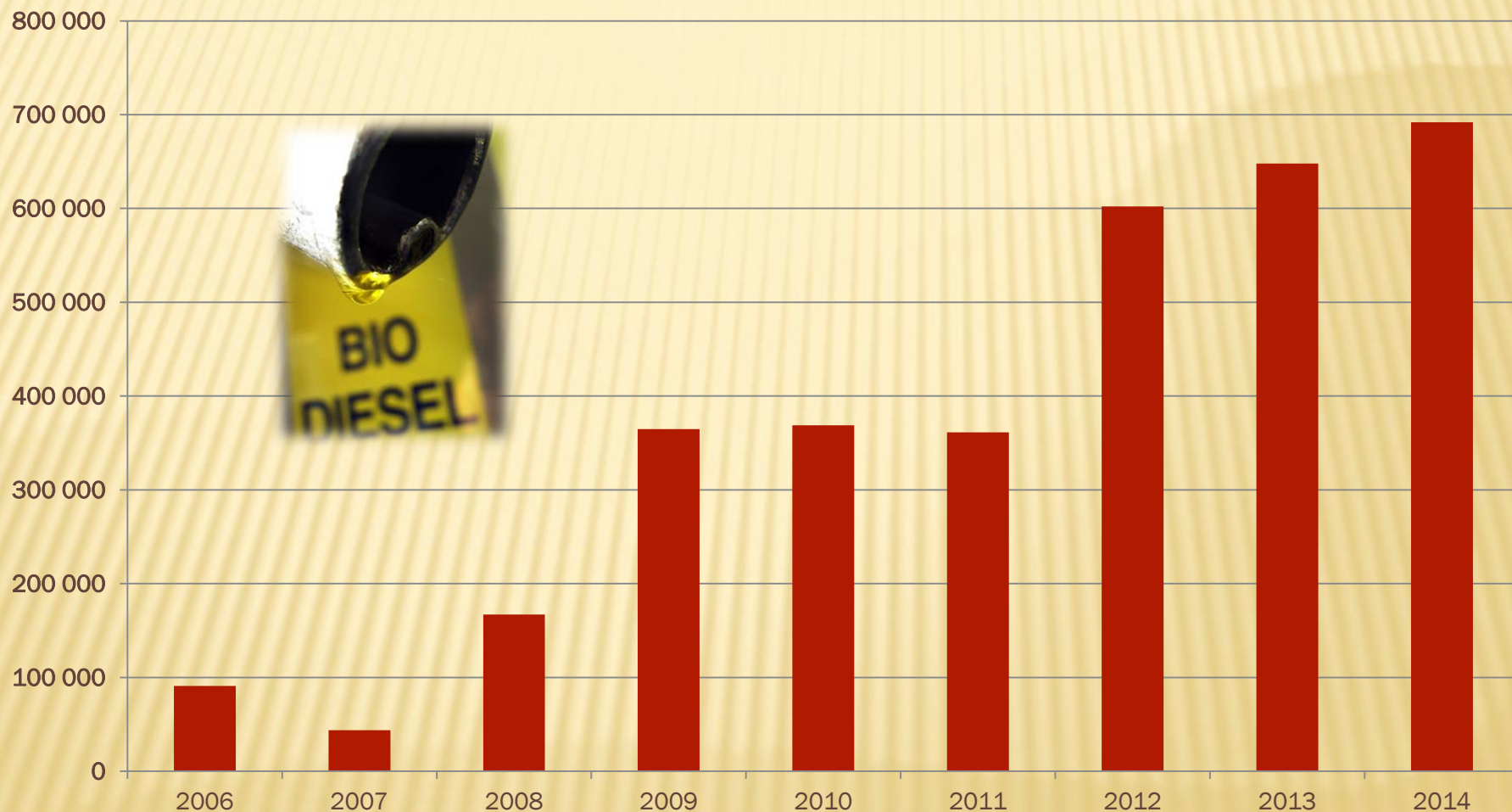


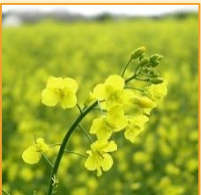


Biofuels as a substantial part of green economy



Production of biodiesel (FAME) in Poland (t):

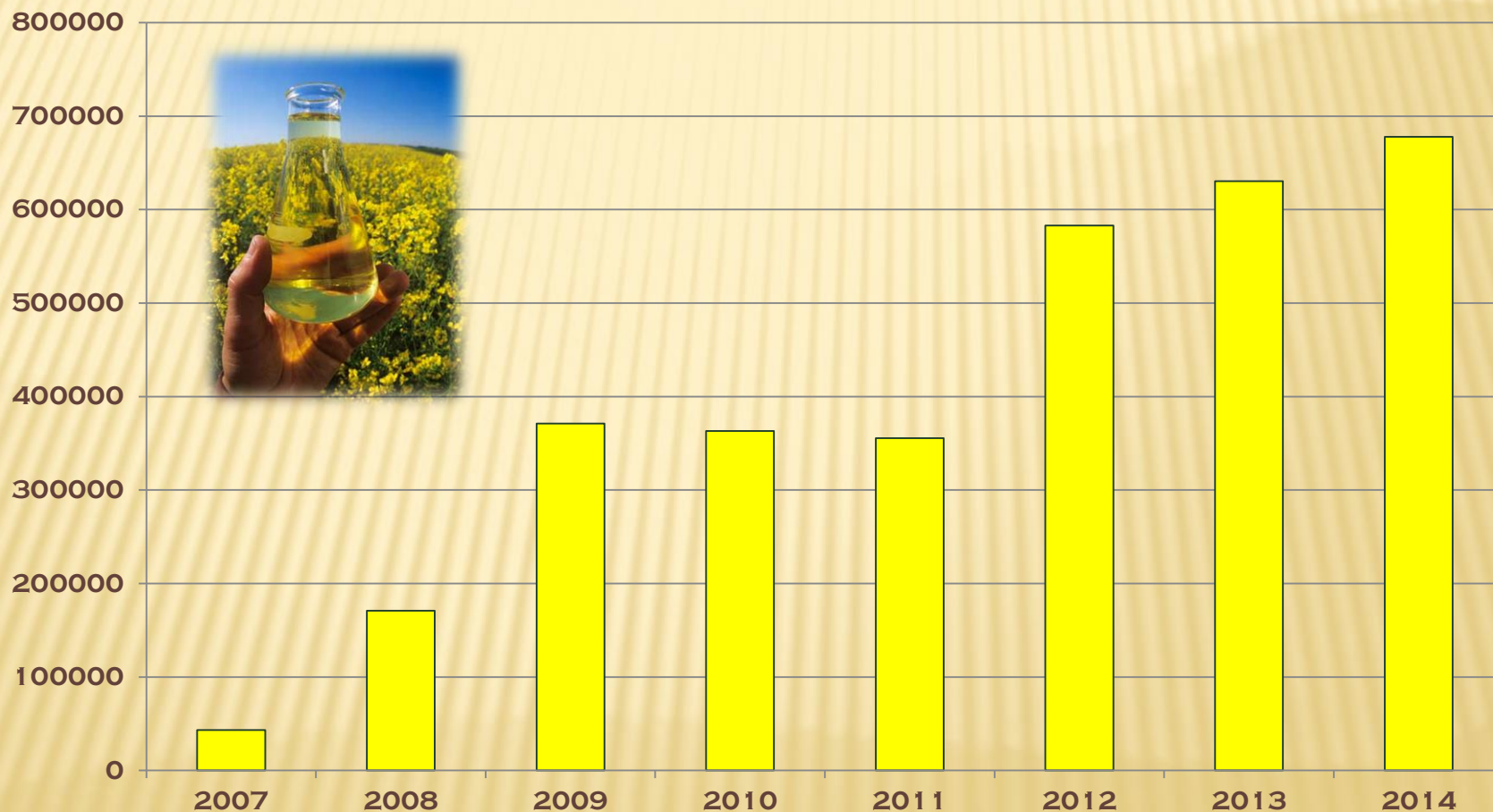




Biofuels as a substantial part of green economy



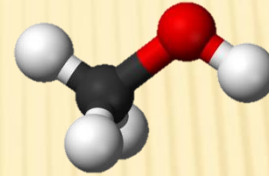
Rapeseed oil use as biodiesel feedstock (t)

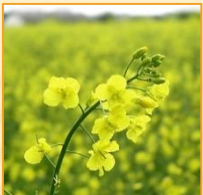


Source: Agency of Agricultural Markets



Biofuels as a substantial part of green economy





Rapeseed oil – gold drop from Polish fields



Currently cultivated varieties of rapeseed in Poland are known as double improved due to the removal of erucic acid.

The oil made from such a rapeseed is fundamentally different in terms of fatty acid composition than traditional varieties grown in the past.

As a result, rapeseed oil is now a universal, high suitability for food, and is suitable for processing in different technologies .

pokochaj olej rzepakowy

ENJOY IT'S FROM EUROPE

Olej rzepakowy zawiera 10 razy więcej Omega-3 niż oliwa z oliwek*

10% kwasów Omega-3

1% kwasów Omega-3

Miej więcej oleju w głowie www.pokochajolejrzepakowy.eu

* dane Instytutu Hodowli i Aklimatyzacji Roślin opublikowane w monografii pt. „Olej rzepakowy – nowy surowiec, nowa prawda” pod red. prof. dr. hab. Jana Krzymańskiego (Warszawa, 2009)

KAMPANIA FINANSOWANA PRZY WSPARCIU UNII EUROPEJSKIEJ ORAZ RZECZPOSPOLITEJ POLSKIEJ **Agencja Rynku Rolnego**



Rapeseed oil – gold drop from Polish fields



Unique fatty acid profile, rich in **oleic acid** and low in **saturated fats**, makes it particularly beneficial for the prevention of **heart disease**.

It contains significant amounts of **omega-6** and **omega-3 fatty acids**, also shown to have wide health benefits, in the desired ratio of 2:1.



Comprehensive ingredient:



salad oil



cooking



margarines



frying



Biofuels as a substantial part of green economy



On June 16 the report **“Reconciling food security and bioenergy: priorities for action”**, produced by the International Food Policy Research Institute (IFPRI) together with the World Bank, the Delft University, the Centre for Environmental Policy of the Imperial College London, amongst others concludes that **concerns over food supply insecurity, as a result of cultivation of biofuels feedstock, are largely misplaced.**

It says **“...well designed biofuels usage programmes can simultaneously improve food security in countries with populations at risk of under nourishment, and in more developed economies.”**

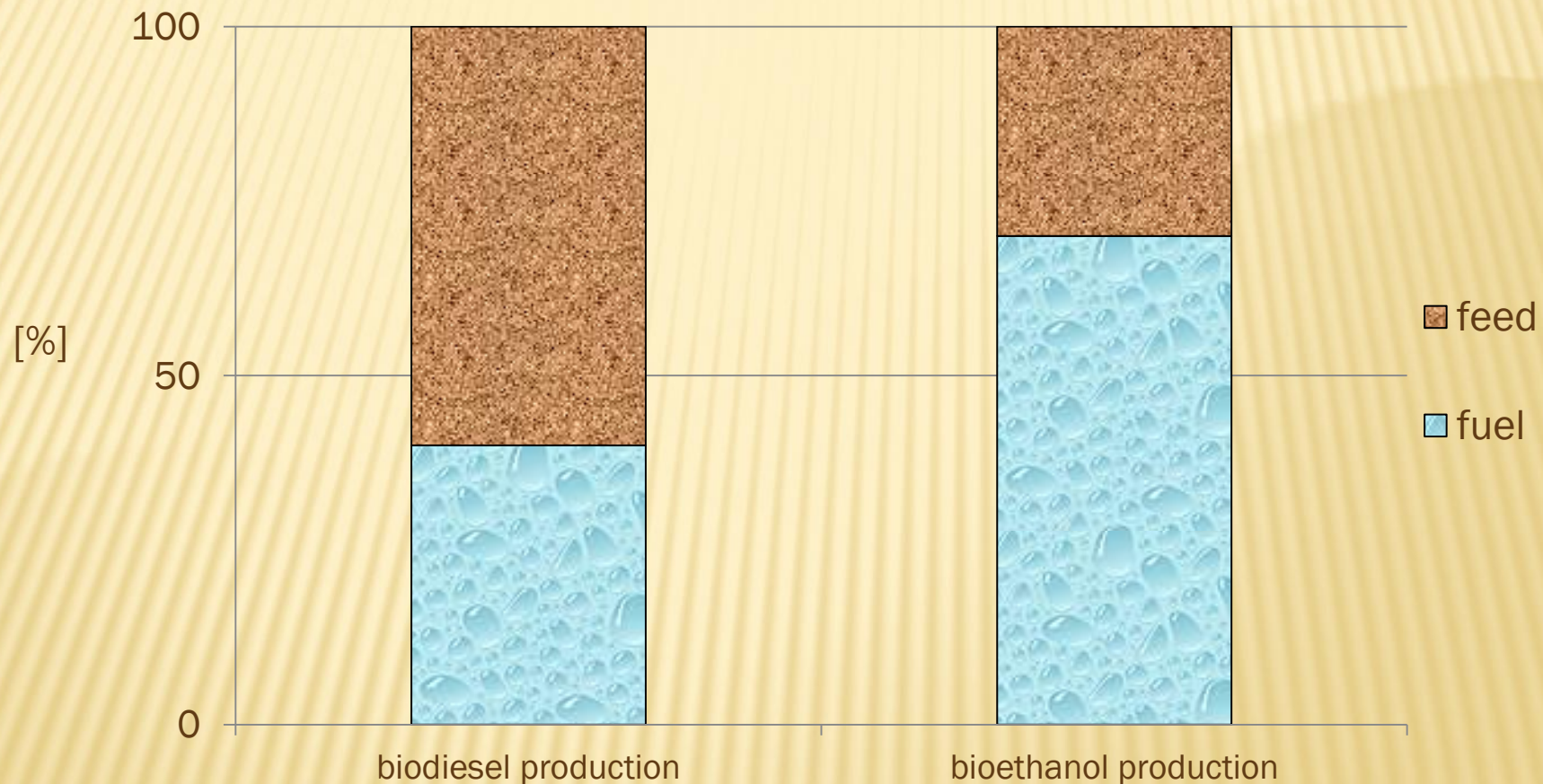
This new report concludes that food and bioenergy do not need to compete for land, and recognizes the positive effects of biofuels use in providing jobs and resulting economic growth. The report states that properly regulated biofuels production can lead to heightened energy security, not just in transport which in itself can provide wider access to domestic markets, boosting jobs and services, but also in improving food processing and storage.



Biofuels as a substantial part of green economy

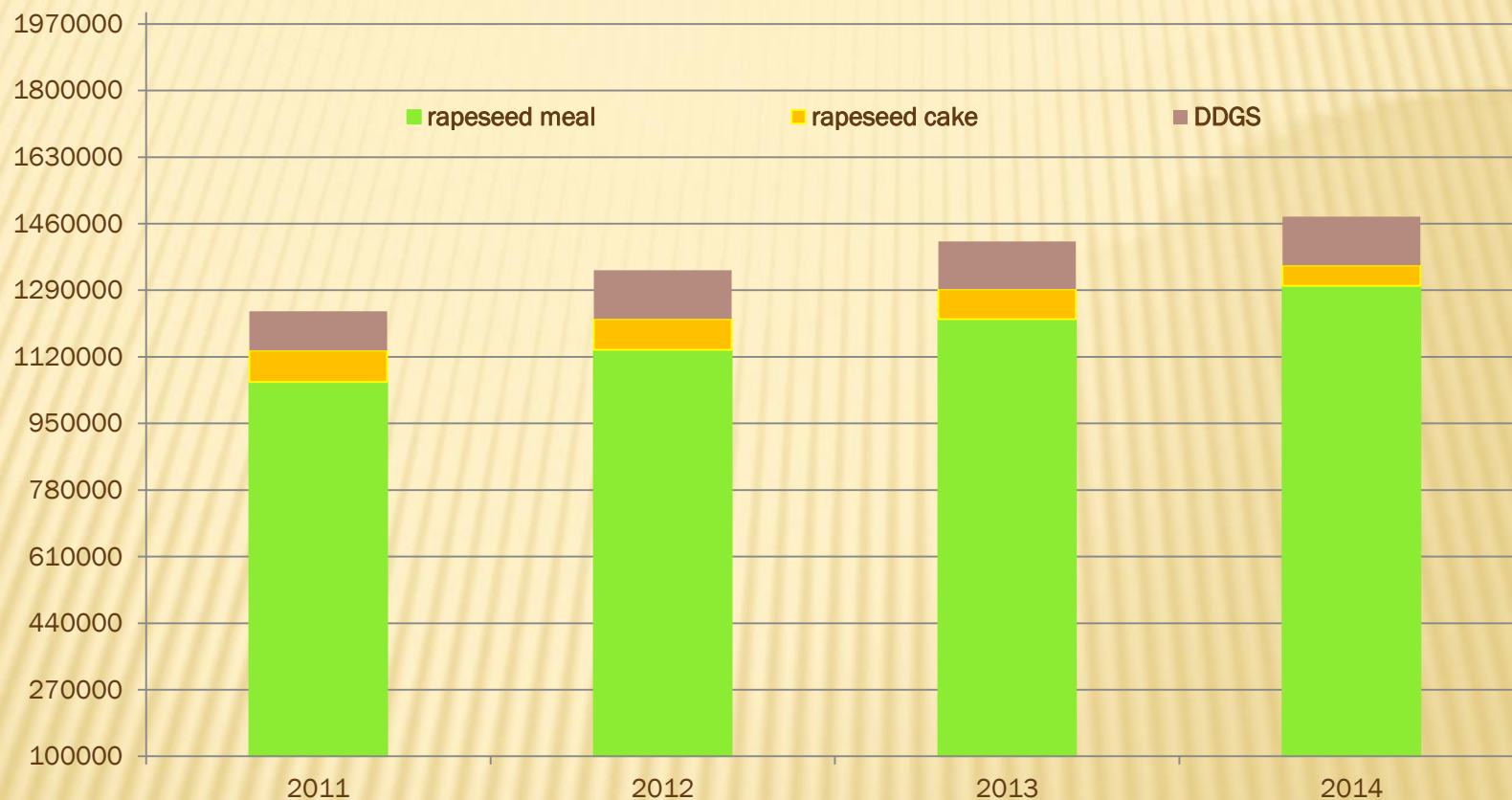


Feed vs fuel ratio in biofuel production





Biofuels as a substantial part of green economy



Biofuels as a substantial part of green economy



Production of bioethanol in Poland (m³):

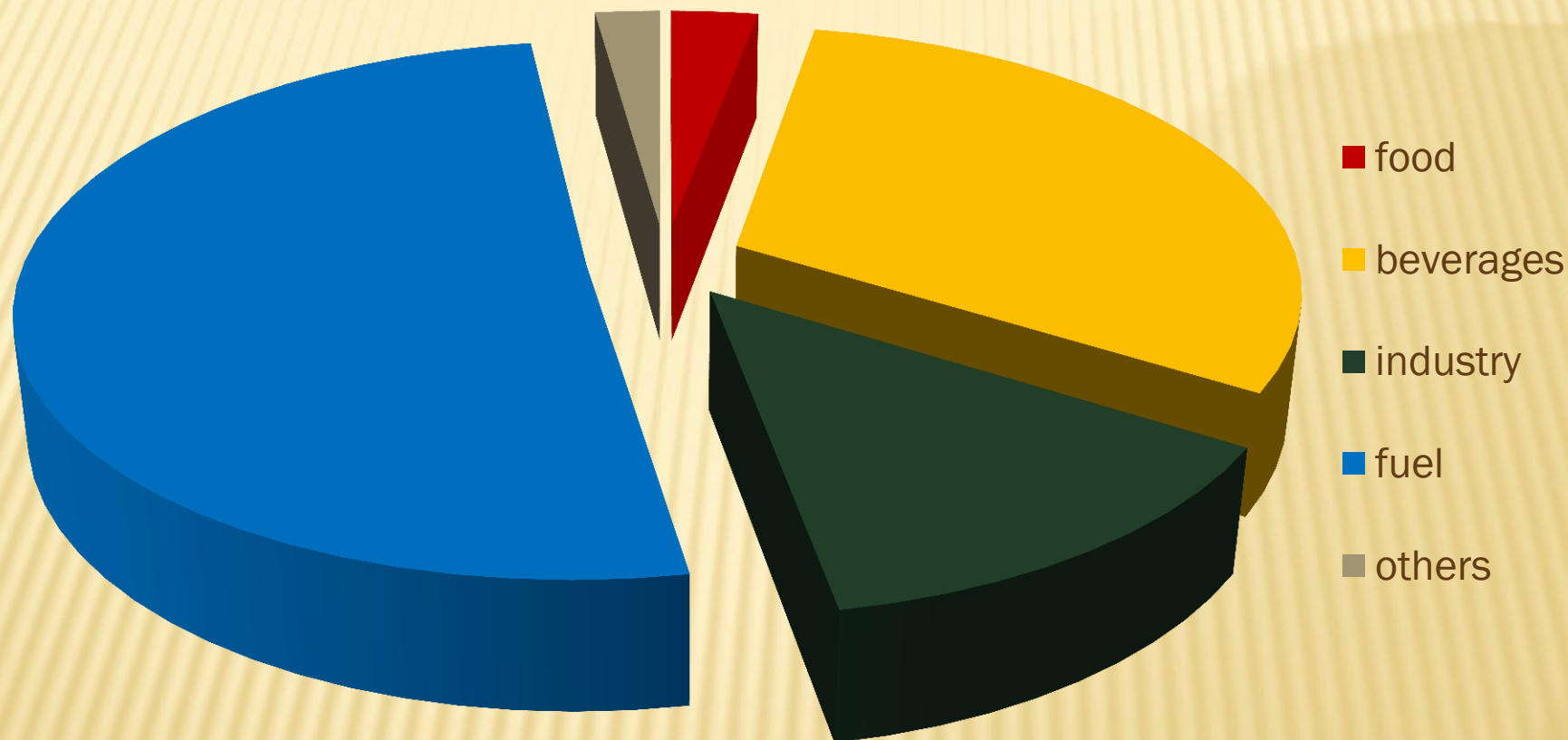


Source: Energy Regulatory Office

Biofuels as a substantial part of green economy



Structure of agricultural alcohol use in Poland (2013)



Source: Ministry of Agriculture and Rural Development

Concultions

- Biofuel production is important driver for Polish rural development;
- Biofuel plant as a bright example of bioeconomy based on agriculture;
- Changes in biofuel policy will influence strongly on other sectors (food, feed, chemistry);
- Many challanges related to environmental, social and economic issues (ILUC directive, free trade agreements, quality requirements, legal barriers)
- The need of undestanding as a chain from farm to consumer offering different types of the products, not only renewable energy

***THANK YOU
FOR YOUR ATTENTION!***

