



COMMERCIALISATION OF BIOFUELS IN POLAND

Śławomir Podlaski

Department of Plant Physiology

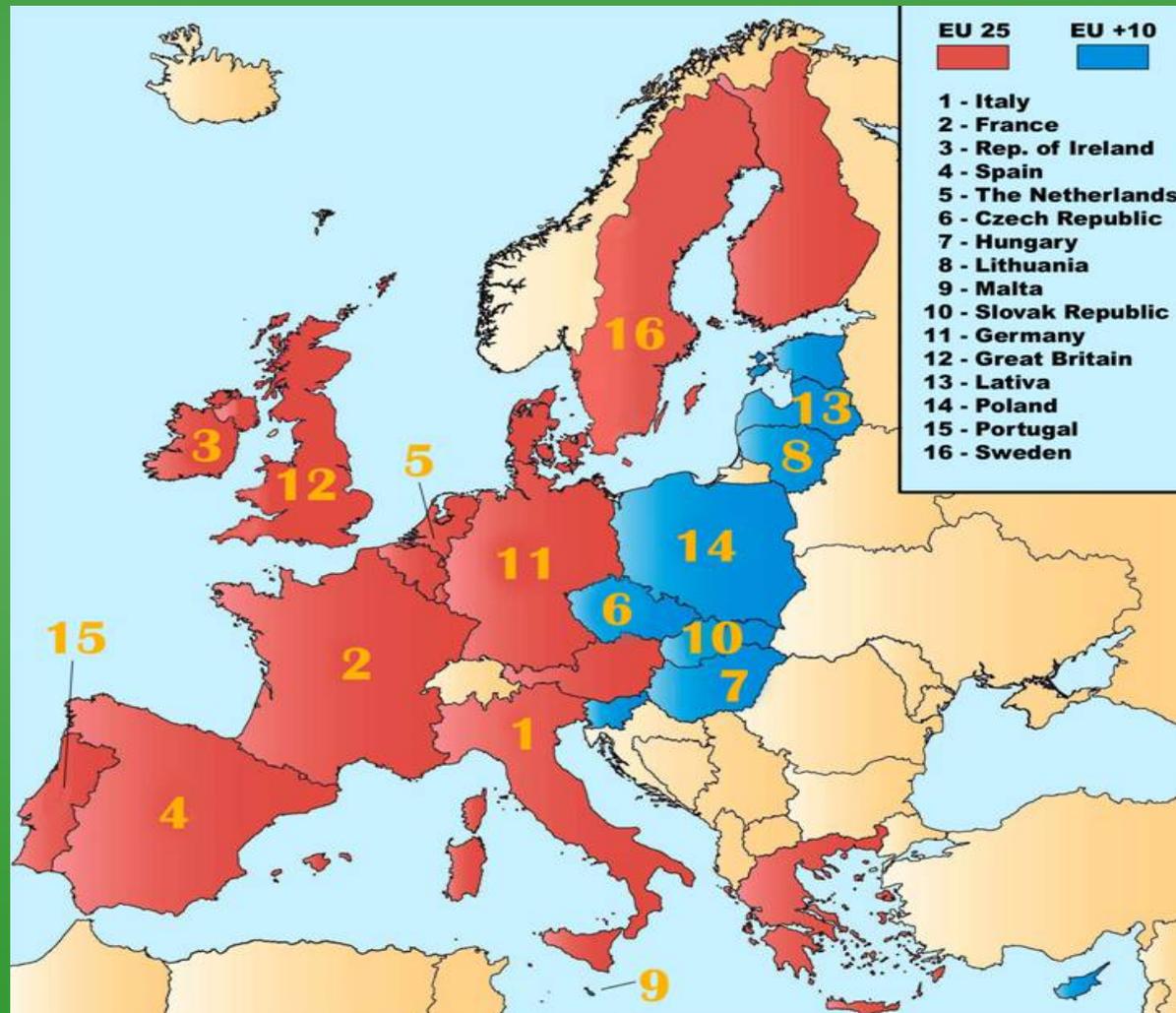
Faculty of Agriculture and Biology

Warsaw University of Life Sciences

e-mail: slawomir_podlaski@sggw.pl

**USDA Global Conference on Agricultural Biofuels: Research and Economics
Minneapolis, Minnesota - August 20-22, 2007**

1 May 2004 eight countries of Central and Eastern Europe - join the European Union



As the member of UE Poland is obliged to fulfill European directives and obligations

According to the EU 2003/30/ directive
a share of biofuels in total use of all
transport should reach in 2010
5.75% (energetic value)

Probably, in 2010 average share of
biofuels in the EU will fluctuate around
4-5%.

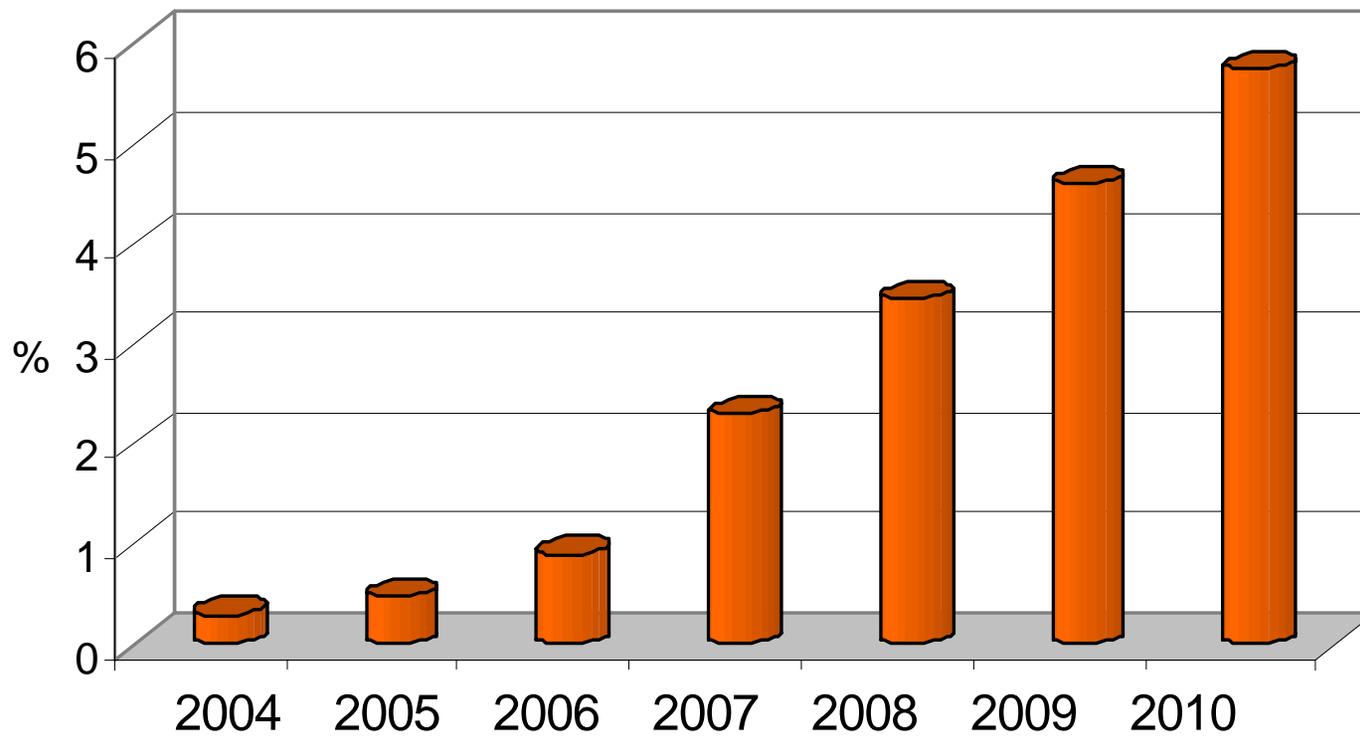


Figure 1. Share (%) of biofuels in Poland in 2004-2010

Wishful thinking or reality?

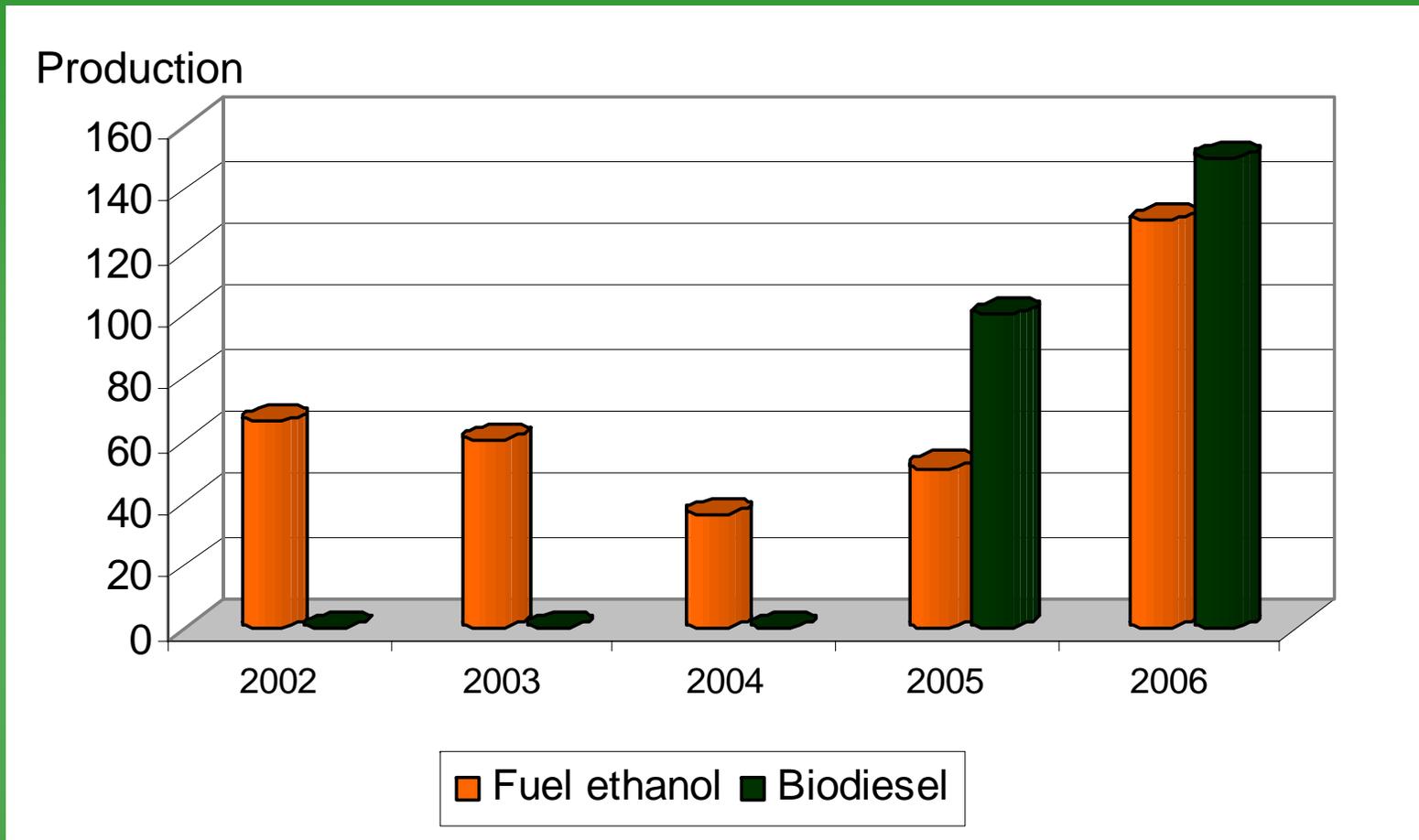


Figure 2. Production of biofuels in Poland in 2002-2006 (thousands tons)

Raw materials for production of bioethanol

Rye 70 - 85 %

Sugar beet/molasses 10-20%

Potatoes 5 -10%

Other ingredients 3-4 %

There would be no problems with raw material for bioethanol production

Possibilities of increasing production of biodiesel in Poland

Raw material - seeds of winter rape

Domestic demand for rape seed for:

food 2006 - 1 mln t, 2010 - 1,3 mln t

biodiesel 2006 - 0,31, 2010 - 1,43

the need for increasing area under rape from 0,5 to 1 million hectares

It can be difficult !!!

The basic problem of biofuels production development in Poland

Tax policy!!!

Total cost of 1 liter of biofuels and conventional fuels (less VAT and excise duty).

Bioethanol - 4,115 PLN

Biodiesel - 3,324 PLN

Petrol - 1,601 PLN

Diesel - 1,781 PLN

Difference: 2,514

1,543

Cost of fuels at pump station (22.06.2007)

Petrol (Pb 95) - 4,43 PLN

Diesel - 3,71 PLN

1 USD = 2,28 PLN

Promotion of biofuel production in Poland

- exempt from excise duty - 1,561 PLN/l for ethanol and 1,048 PLN/l for biodiesel
- reduction of 19% of surplus biofuels production costs over the cost of production of Mineral fuel
- subsidy of 45 E/hectare for energy crops
- financial support for investment

In March 2006 was established

**Polish Technological Platform for Biofuels
and Biocomponents**

for promotion of raw material and biofuels production

The main target of research and technology progress is decreased cost of biofuels production

Share of feedstock in:

ethanol production - about 50%

biodiesel - about 75-85%

Main target : increase yield of carbohydrate and oil per unit area

Breeding new hybrid varieties of sugar beet, rye and rape more suitable for production of biofuels

There is lack of research on evaluation of different cellulose feedstock for production of ethanol

Improvement of conversion technology

Biofuels production technology research are conducted in the following fields and institutes:

Institute for Fuels and Renewable Energy in Warsaw

Elaborations of new fuels and lubricants production technology.

Industrial Chemistry Research Institute in Warsaw

Production technology of RME (rape methyl esters)

Production technology of technical glycerine

Institute of Petroleum Processing in Cracow

Development production technology of biofuels and additives for conventional fuels blends with biofuels (Bioxiten 51 for biodiesel and Petrosol for gasoline)

Evaluation, certification and standardization of ethanol and other alcohols used as a gasoline compounds.

There is lack of research on:

- improvement of ethanol production technology
- evaluation of usefulness of different cellulose feedstock (energy crops) for production of ethanol
- genetic modification of micro-organisms for production of ethanol

Thank you for your attention