

Tillage Production to 2020



Drivers of Change

- ◆ Increased international competition/market liberalisation (increasing prices, costs, labour)
- ◆ Consumer expectation for higher quality, safer and diverse foods
- ◆ Societal expectation for greater protection of the environment
- ◆ Diversification in crops & crop uses

Value of Tillage Sector

- **Output €600 Million**
 - Of which grain crops €425M
 - Potatoes €145
 - Forage maize & beet €20M
- *In addition SFP = €150M*
- **Employment: 30,000**
 - Of which 15,000 growers
 - Food/feed/chemical industries 15,000

■ **Positives**

- Prices escalating
- Good asset value of land
- SFP
- Renewable energy Developments
- New crops & uses

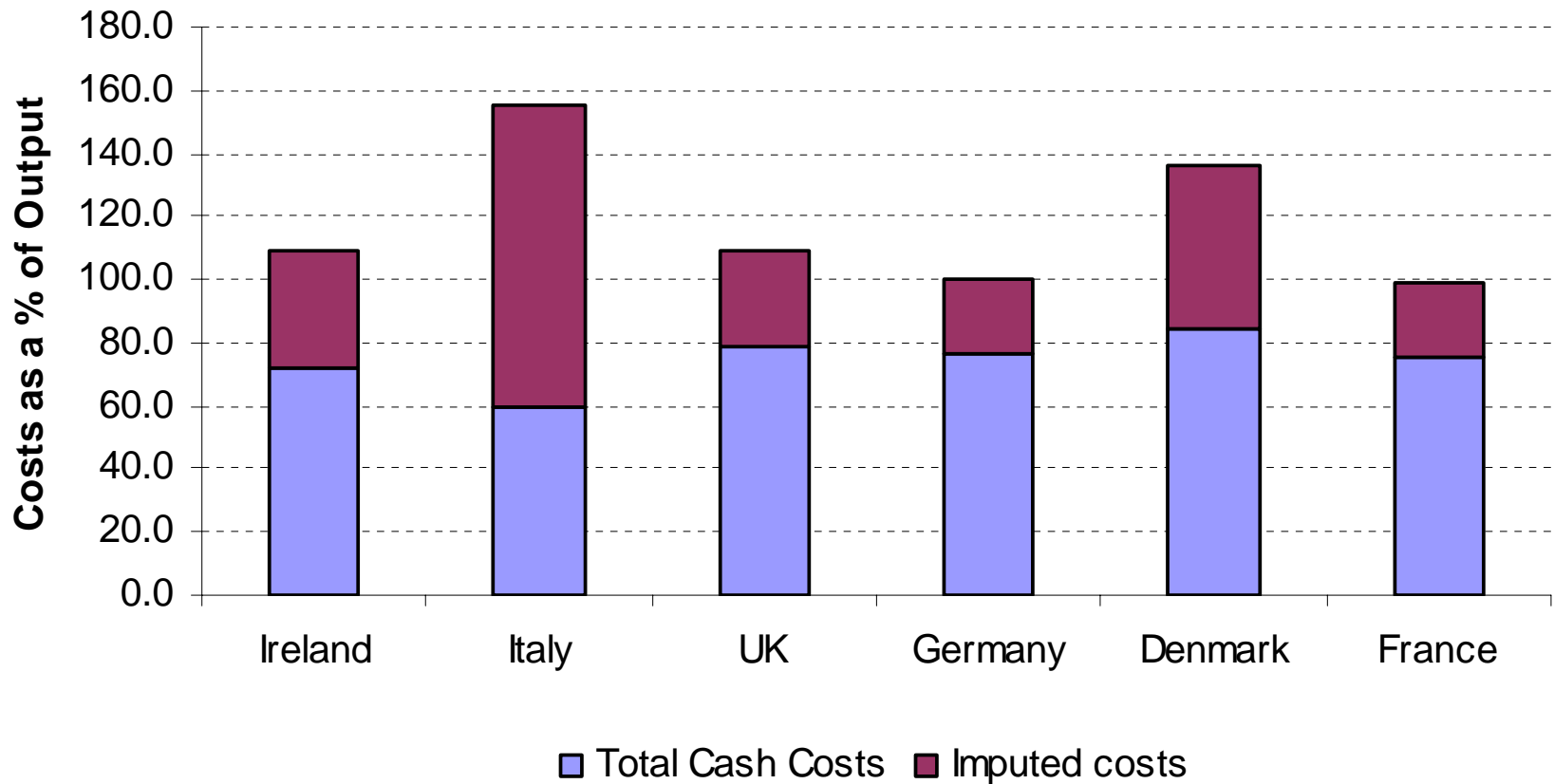
■ **Negatives**

- Land availability
- Regulations more onerous
- Cost Base

Ireland is efficient

Source F. Thorne

Costs as % of Output (1996-2003)



New Crop Varieties

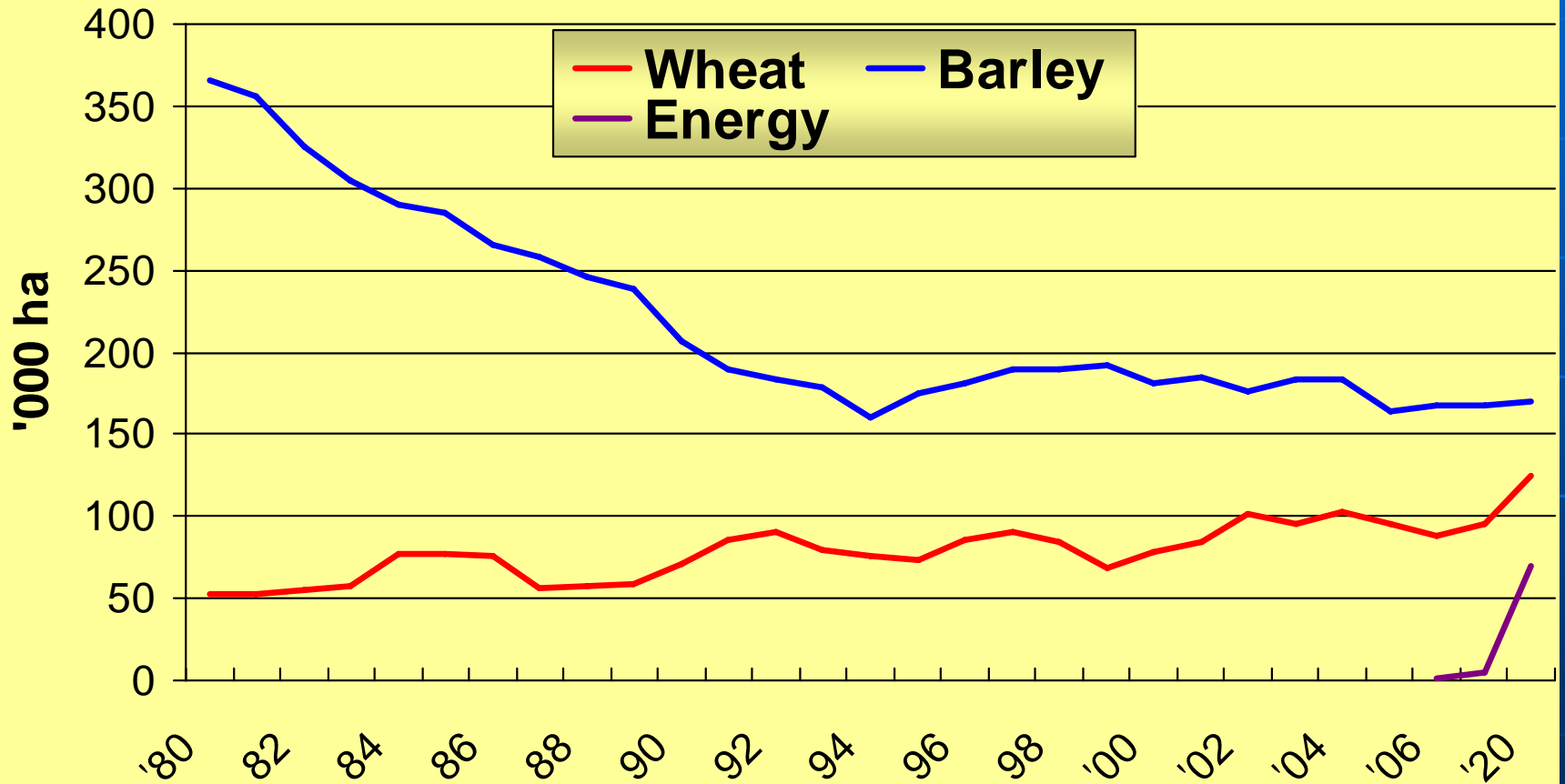
Major improvements in crop varieties will occur through:

- Conventional Breeding
- Hybridisation and Especially
- Genetic Engineering

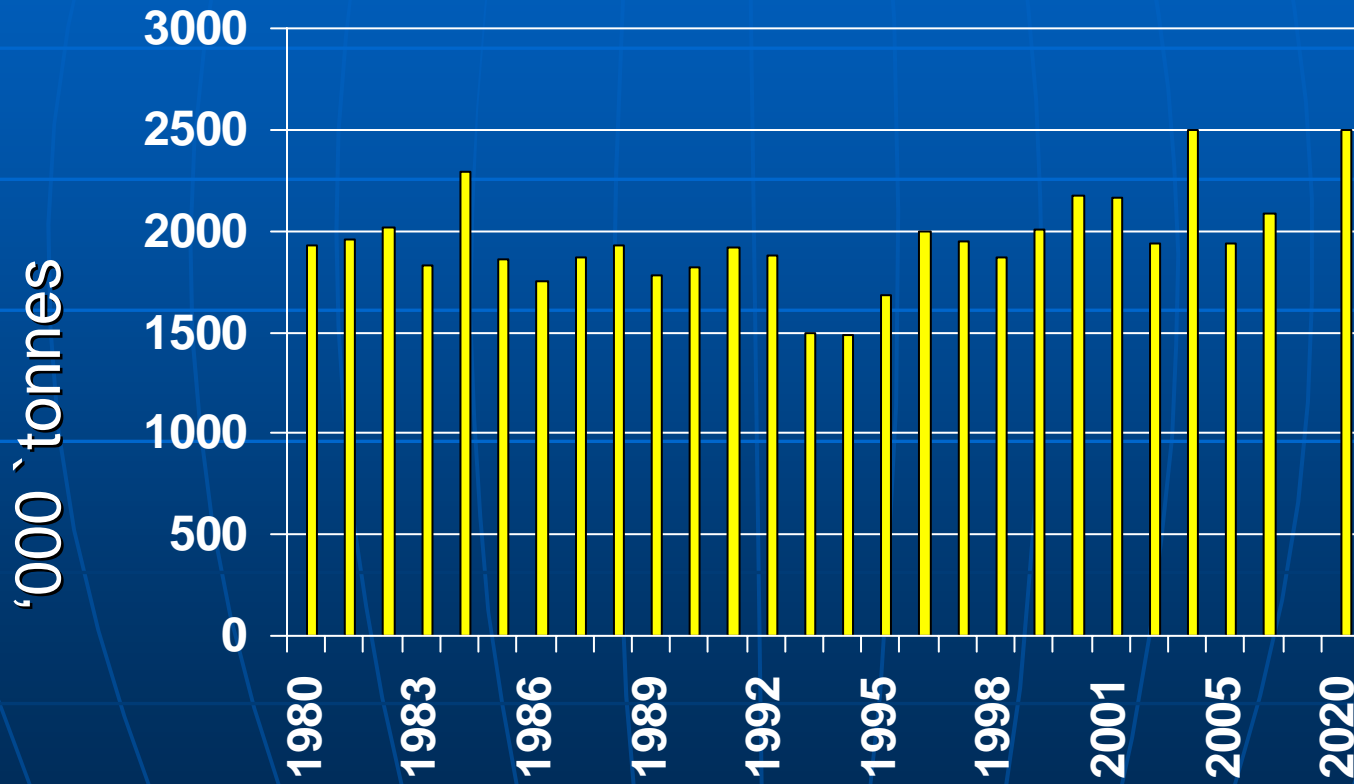
Yields could reach 15 tonnes/ha with:

- Greater disease resistance
- Higher Quality - Tailored to meet Consumer / Processor requirements
- Resistance to Herbicides

Irish Cereal Area trends



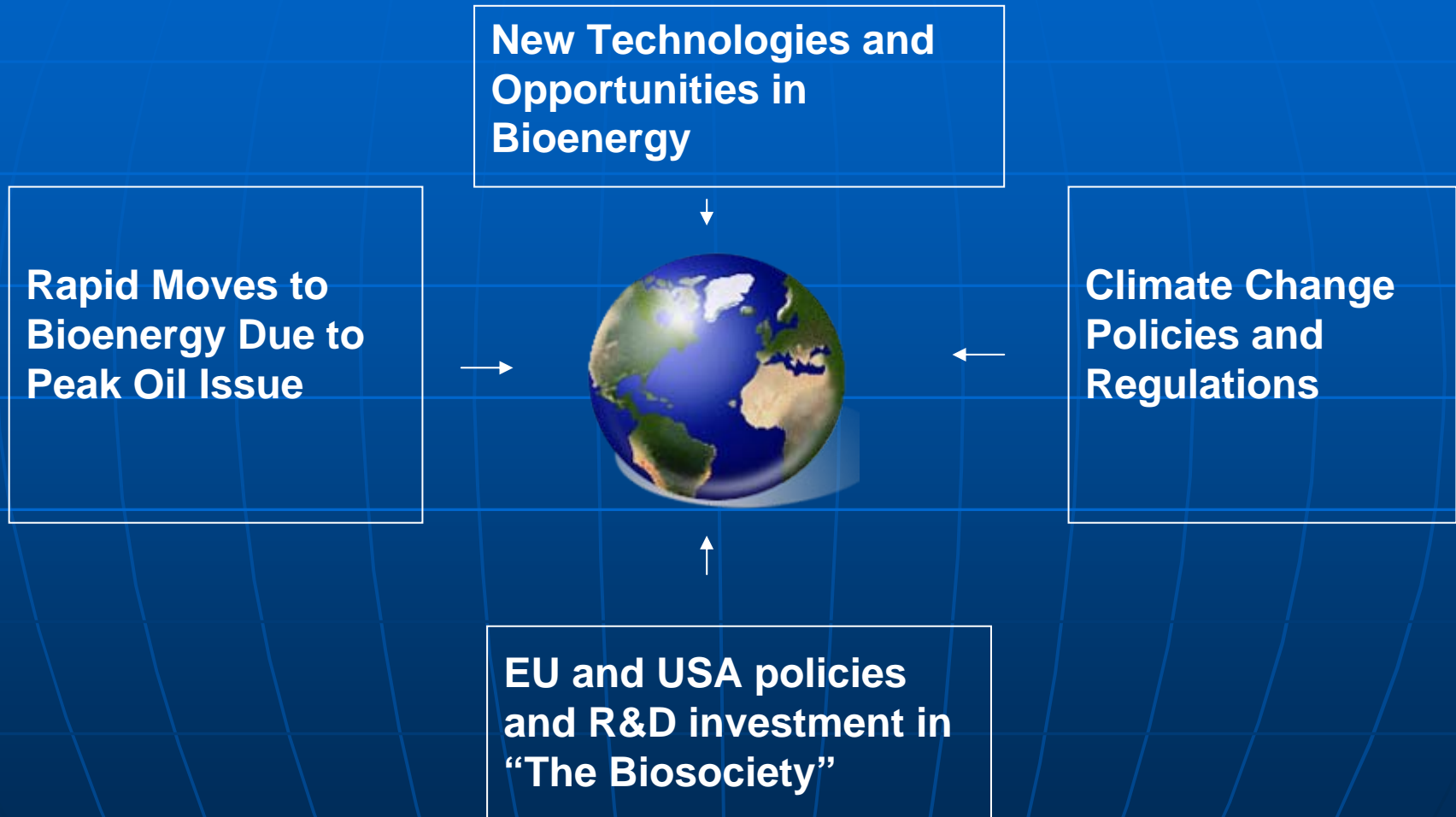
Area Changes and Cereals Output

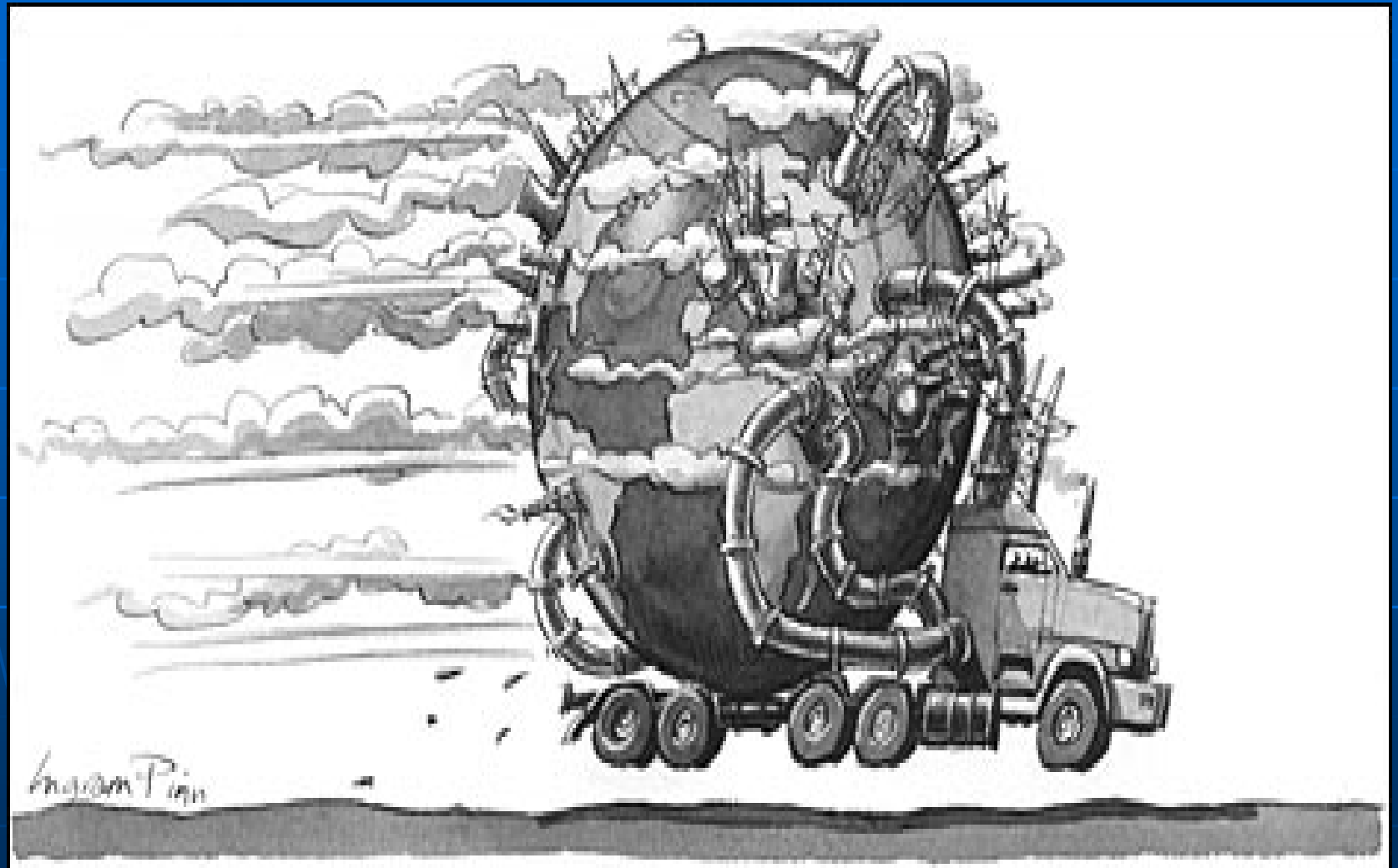


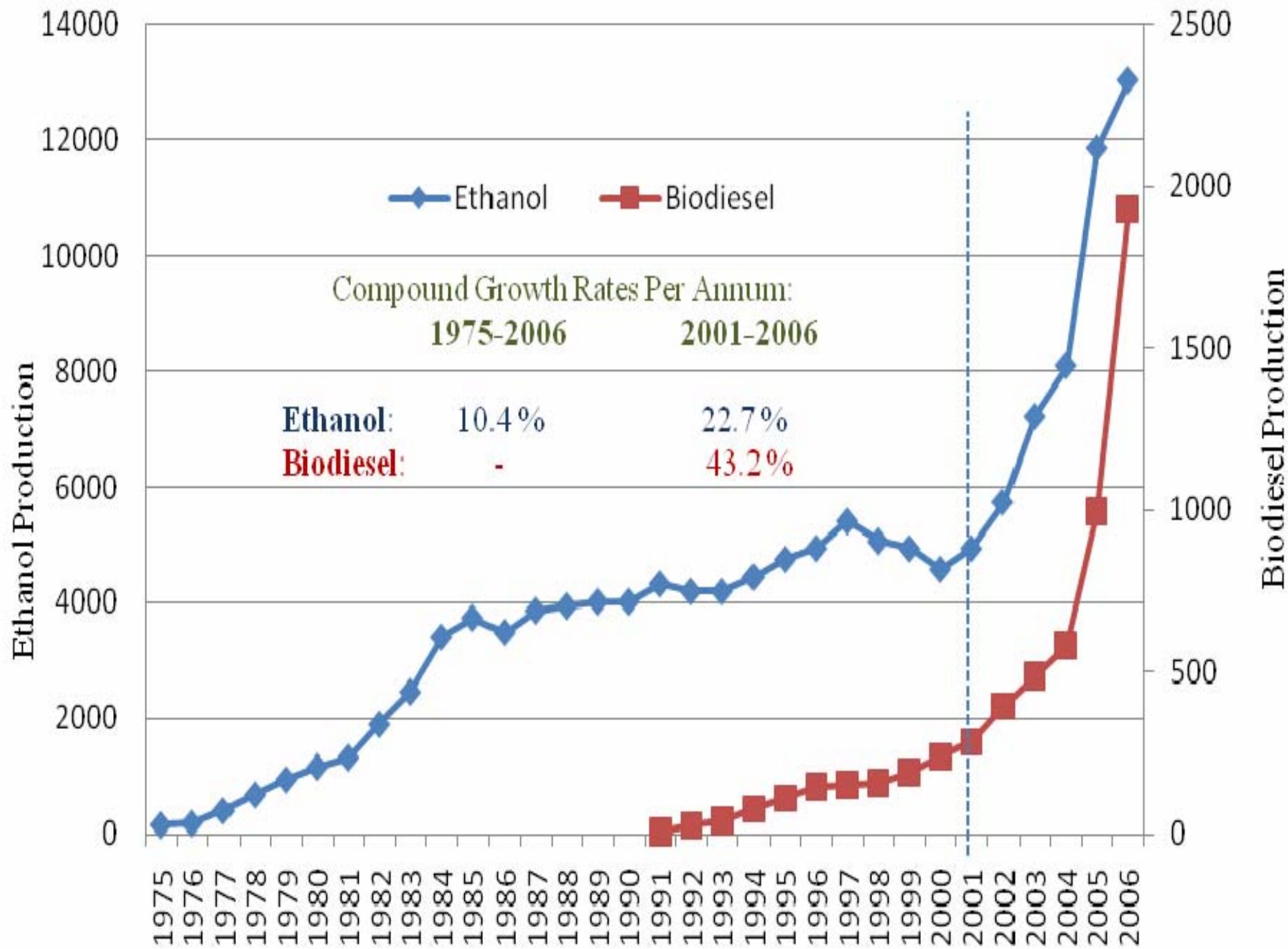


The Challenge: Sustainable Energy

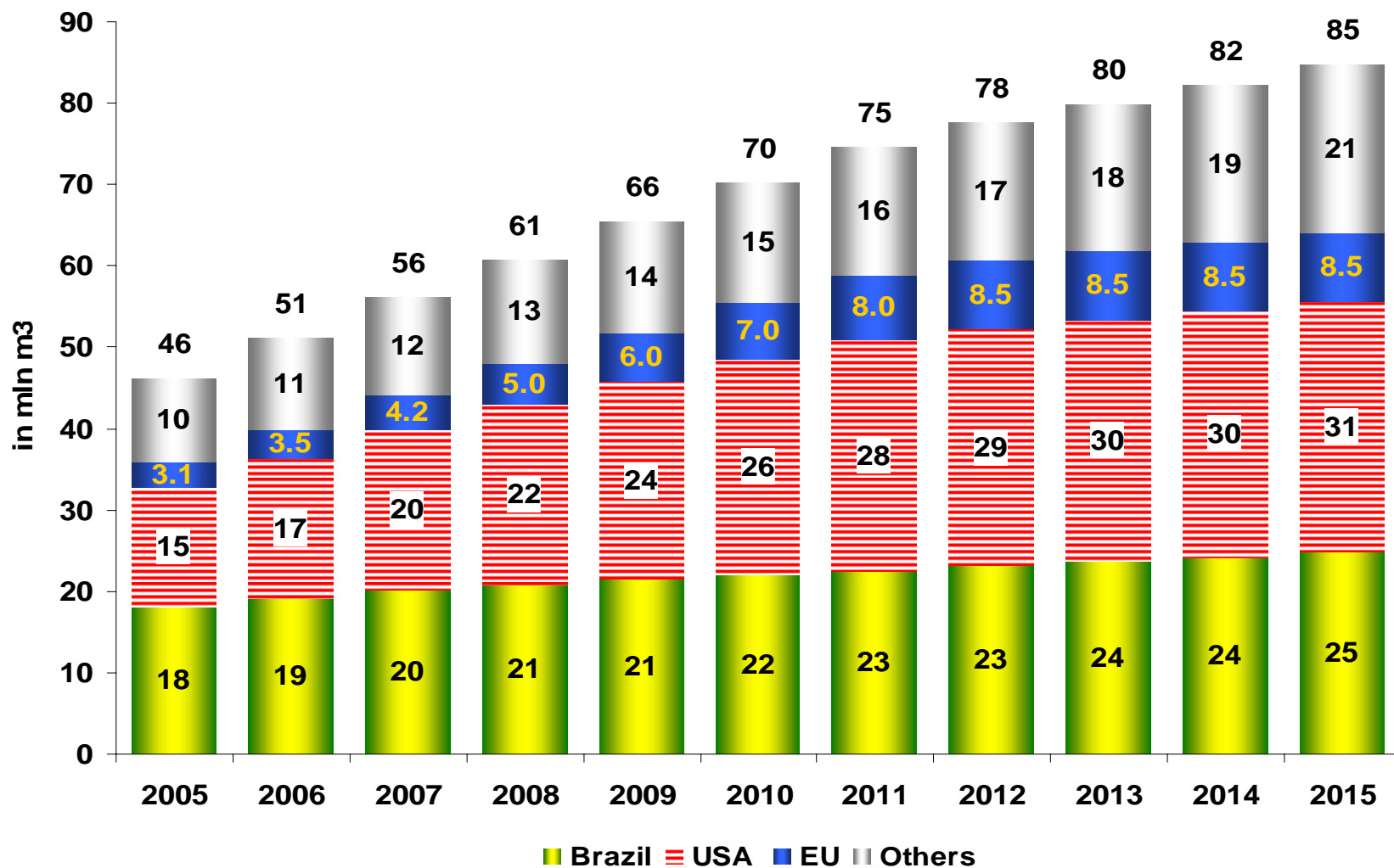
Major Strategic Importance







Global Ethanol Production + (85 %) in 10 years



Possibilities for Ireland

■ LIQUID

- Veg oil/fats as diesel engine fuels
- Ethanol from cereals, beet
- Ethanol from straw/wood
- Gasification + Fischer Tropsch

■ SOLID

- Wood residues, straw, grain
- Energy crops (e.g. willow, miscanthus) + effluent disposal

■ BIOGAS (animal manure + food wastes)

Energy crops





Key R&D Areas for Teagasc

- **Next Generation Biofuel Technologies; Conversion of Lignocellulose for bioenergy and bioproducts**

Novel Plants Designed for Bioenergy Use

- **Integrated Plant Sowing, Harvesting and Pre-Processing**
- **Establishment of New Standards, Databases, etc**

Tillage to 2020

- Area devoted to tillage and energy crops could increase by 40 % by 2020
- This will be largely driven by demand for energy crops
- The number of full time tillage farmers will be about 1,000 farming in excess of 200 ha.
- There will be about 14,000 other part time farmers with tillage and energy crops. Many of these will be in REPS

Tillage to 2020

- **Area devoted to maize production to increase by 22,000 ha**
- **Oil Seed Rape to increase to support biofuel expansion and other high value food ingredients – could increase to 16,000 ha**
- **70,000 Ha of perennial bioenergy crops will be required to meet energy and climate change requirements.**

**Thank you for your
attention**