



BIOFUELS FROM A FOOD INDUSTRY PERSPECTIVE

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UN warns of unrest as food price inflation hits developing countries

Wheat prices jump 60% since January

By Javier Blas in Rome

Developing countries face serious social unrest as they struggle to cope with soaring food prices, the United Nations' top agriculture official has warned.

Jacques Diouf, director-general of the UN's Food and Agriculture Organisation, said surging prices for basic food imports such as wheat, corn and milk had the "potential for social tension, leading to social reactions and eventually even political problems".

Mr Diouf said food prices would continue to increase because of a mix of strong demand from developing countries; a rising global population, more frequent floods and droughts caused by climate change; and the biofuel industry's appetite for grains.

"That combination of factors

would most likely lead to increases in food prices," Mr Diouf told the Financial Times.

Signs were seen in Mexico this year where mass protests were triggered by rising corn prices. Mr Diouf said food represented about 10-20 per cent of consumer spending in industrialised countries, but up to 65 per cent in developing nations.

"If we continue to see an increase in their [food] prices and in their import bill for food, there is a serious potential situation," Mr Diouf said.

The warning comes as wheat prices are at a high, forcing developing countries such as India and Egypt to pay record prices for imports in what cereal traders described as "panic buying" to beef up reserves.

Wheat prices this week rose to a record \$8.86 a bushel in Chicago, up about 60 per cent since January. Dairy product prices have also set records, while other commodities, such as corn and

soyabeans, are trading well above historical averages.

Mr Diouf said although the biofuel industry directly increased the consumption of only a handful of agricultural commodities, such as corn and rapeseed, its effect spread to other food products because less acreage was devoted to non-biofuel crops and the cost of feeding livestock with grain was pushed up.

"The biofuel industry is a new factor creating demand for food for a non-food use," he said.

Fears about the inflationary impact of biofuels on global food prices have prompted Cargill, the world's largest agricultural company by revenues, to question the White House-led push for an increase in ethanol production through tax subsidies.

Additional reporting by Eoin Callan in Washington

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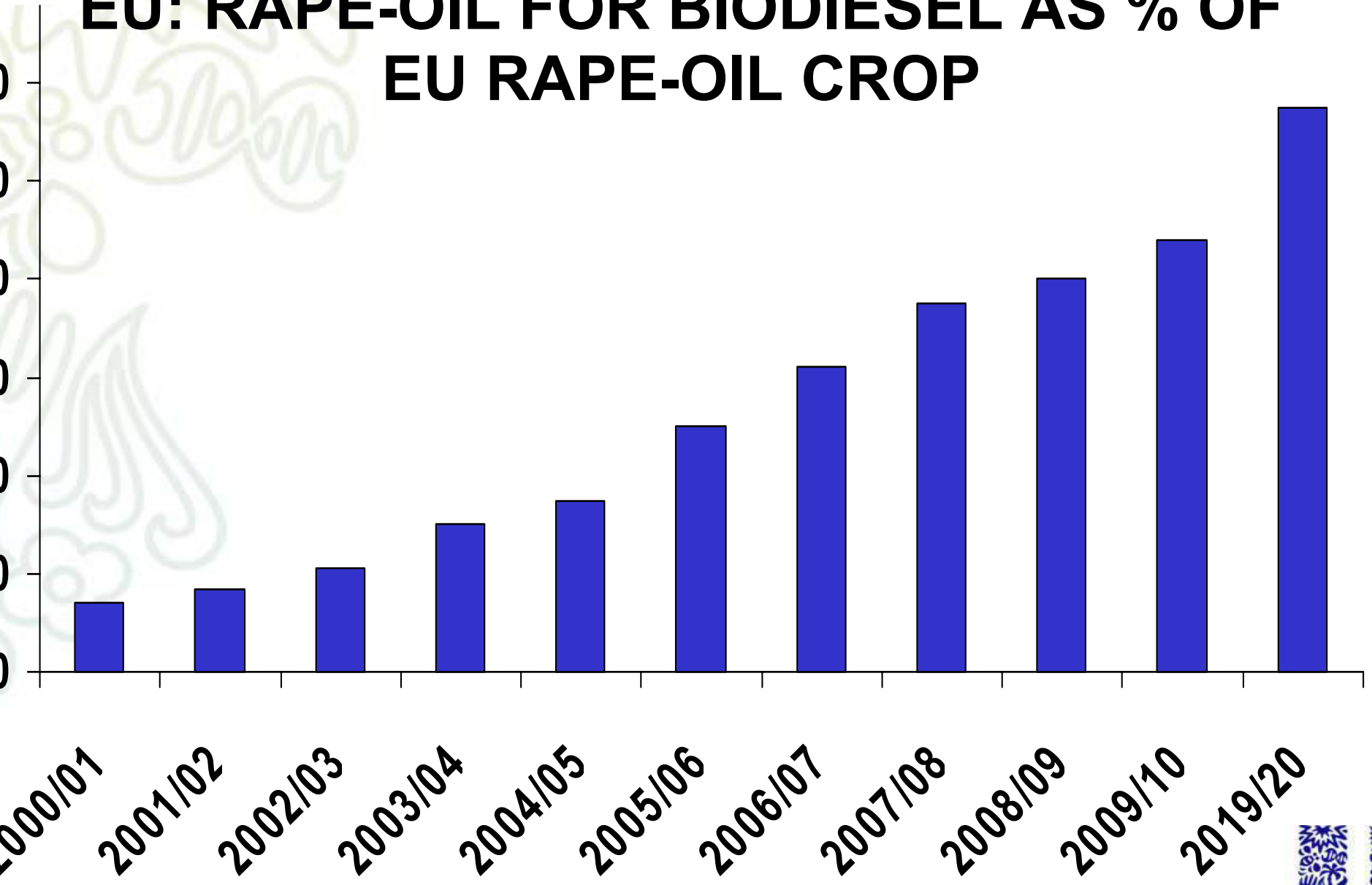
EU BIODIESEL 2007

Biodiesel production capacity 2007	10.2 mln tonnes
Biodiesel production 2007	6-6.7 mln tonnes
Rapeseed oil used for biodiesel	5.0 mln tonnes
Other use of rapeseed oil	2.82 mln tonnes
EU rapeseed production	17.4 mln tonnes
EU rapeseed oil production	7.26 mln tonnes

Biodiesel production increase higher than domestic oilseed production increase

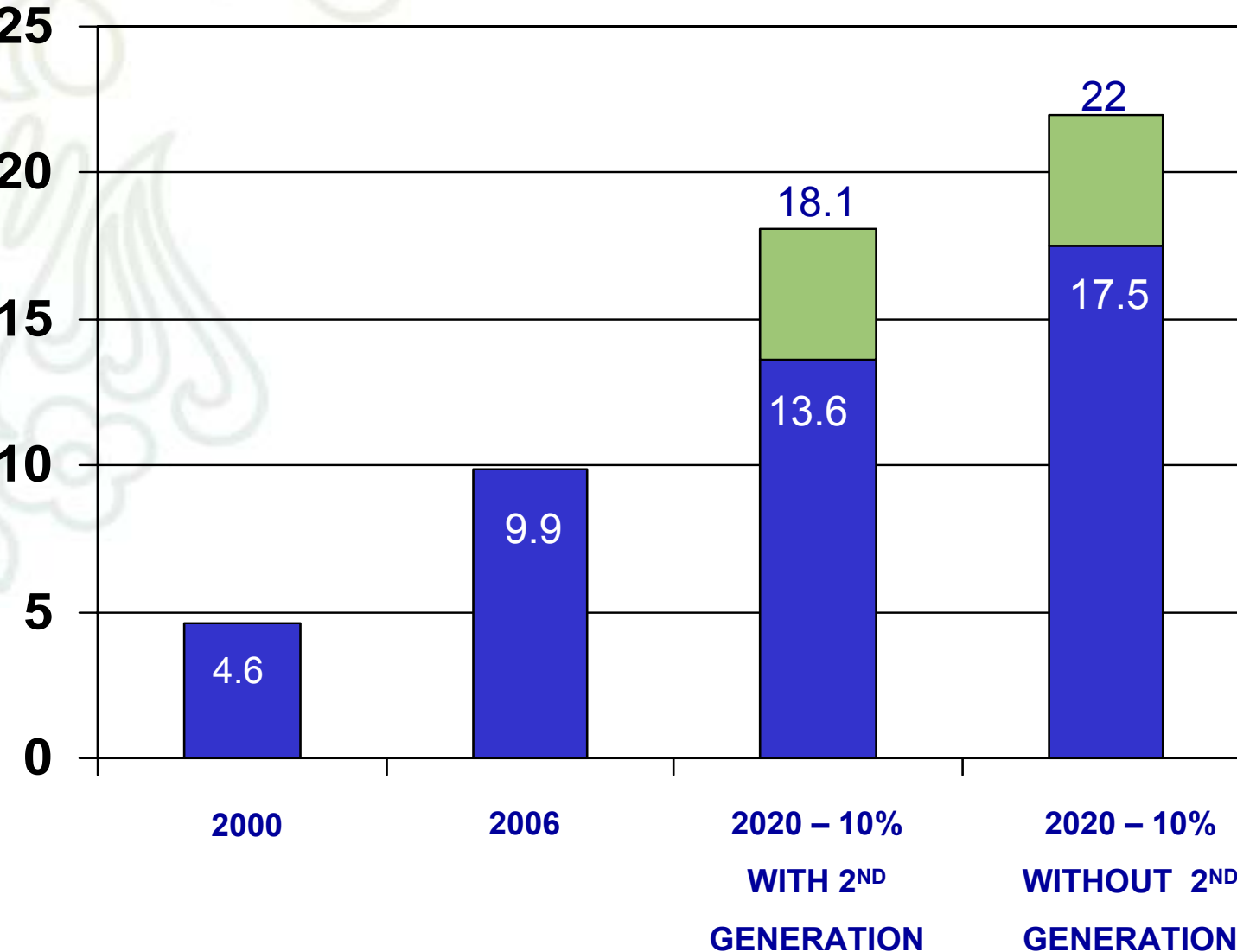
The EU will be dependent on imports from third countries

EU: RAPE-OIL FOR BIODIESEL AS % OF EU RAPE-OIL CROP



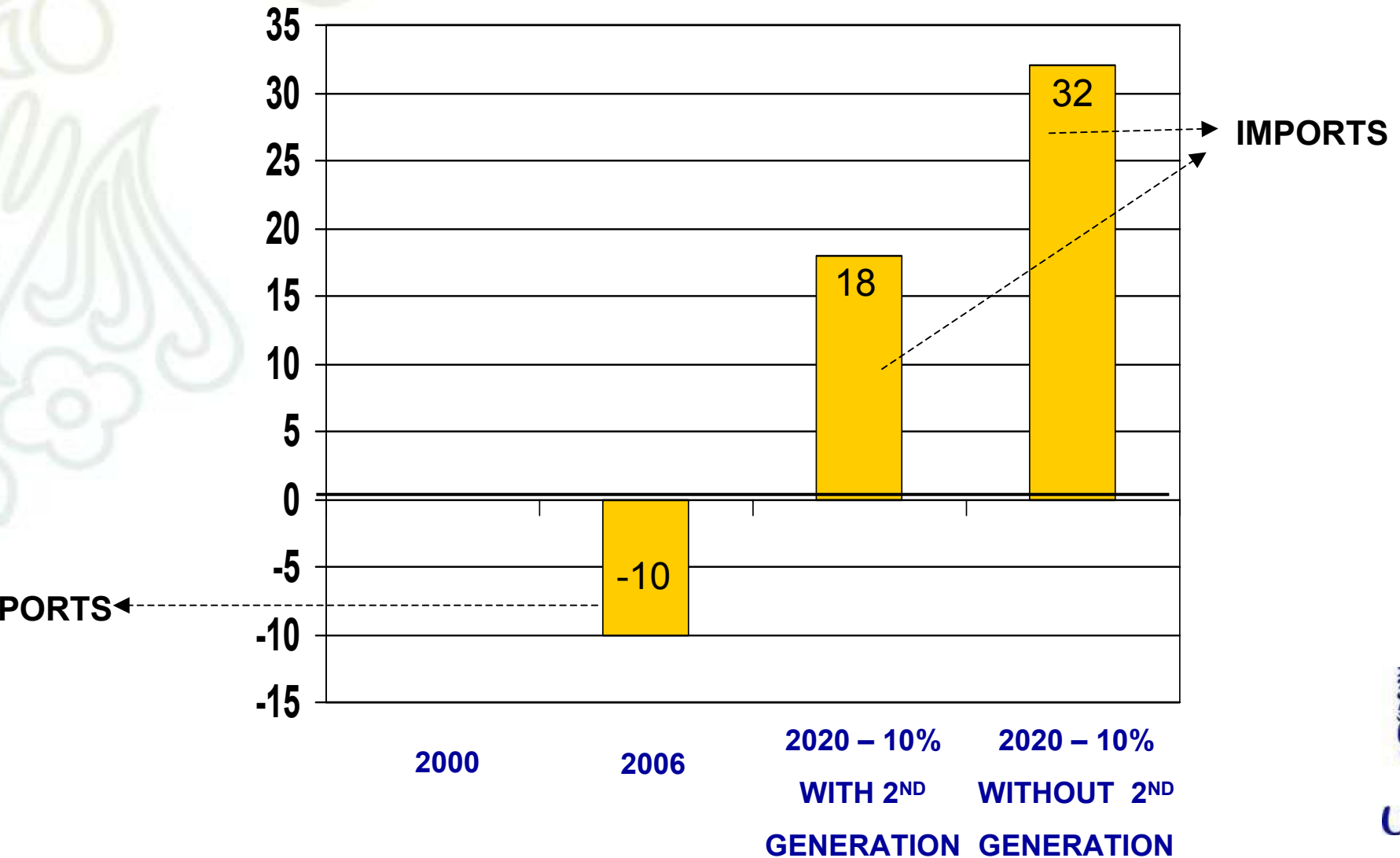
PARADIGM SHIFT

EU SEED OIL IMPORTS (MLN TONNES)



PARADIGM SHIFT

E.U. GRAIN IMPORTS (MLN tonnes)



AVAILABILITY OF RAW MATERIAL - 2020

EU Commission January '07:

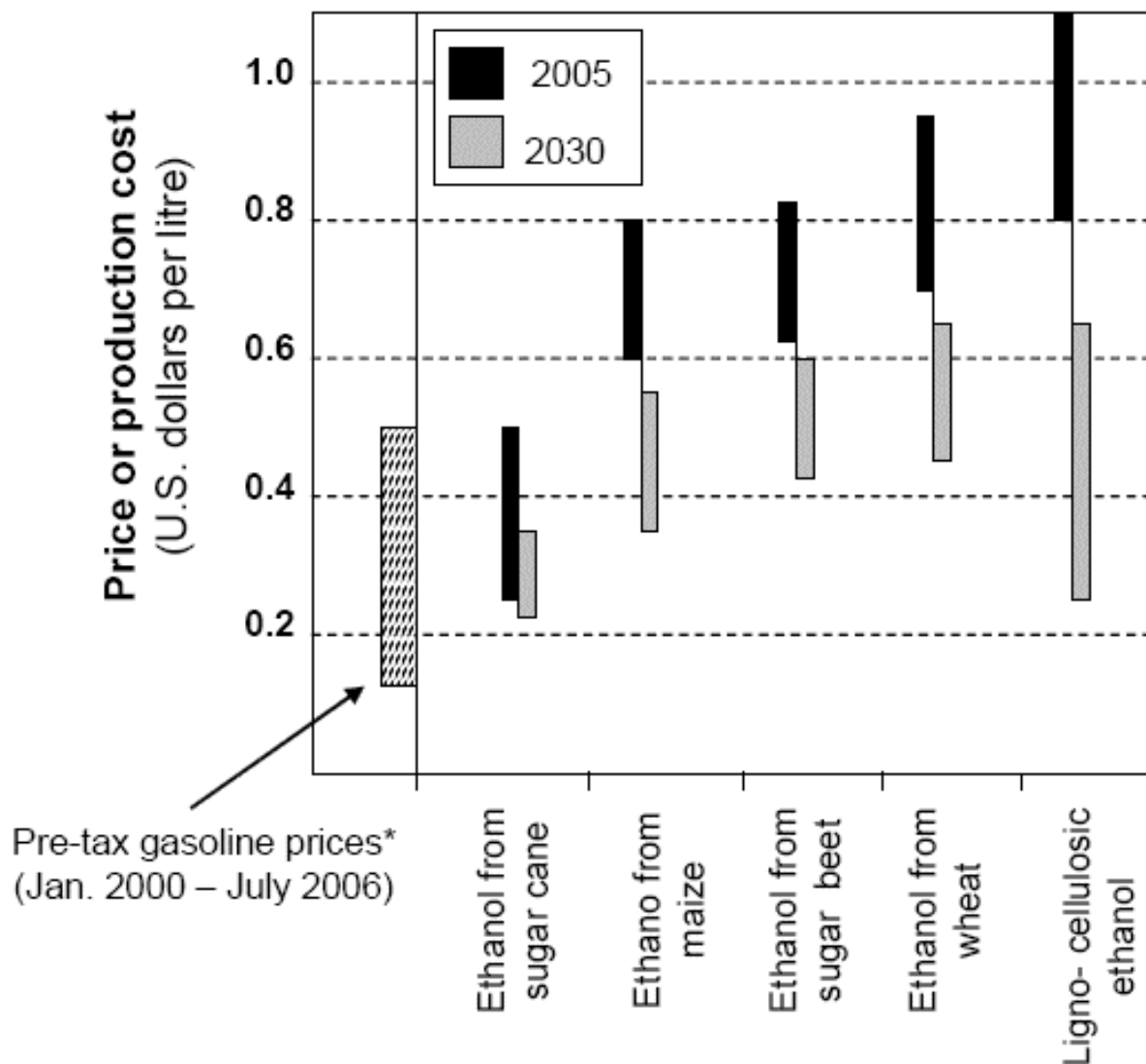
- 18.8 mln t for bio-ethanol (13.42% of petrol market):
11.2 mln t wheat, 5.0 mln t straw, 1.5 mln t maize and
0.8 mln t sugar; 0.3 mln t imports of ethanol
- 9.7 mln t for first generation biodiesel (5.7% of the diesel
market):
4.7 mln t domestic rape, 2.6 mln t soy imports and 2.4 mln t
rape imports
- 2.5 mln t for second generation biodiesel

PRICE IMPACT OF EU BIOFUELS PROGRAMME

	No biofuel use (EU Commission* ; €/t)	2020 (EU Commission*; €/t)	Expected price increase (%)	Aug. 2007 (€/t)
Common Wheat	114	123-131	8-15	234
Rape oil	332	672-737	102-122	715
Soy oil	330	693-745	110-126	664
Rape meal	158	69-63	-/- 56 - -/- 60	166
Soy meal	202	119-104	-/- 41 - -/- 49	232



Figure 3. Current and projected future ethanol production costs, compared with recent (pre-tax) gasoline prices / litre of gasoline equivalent

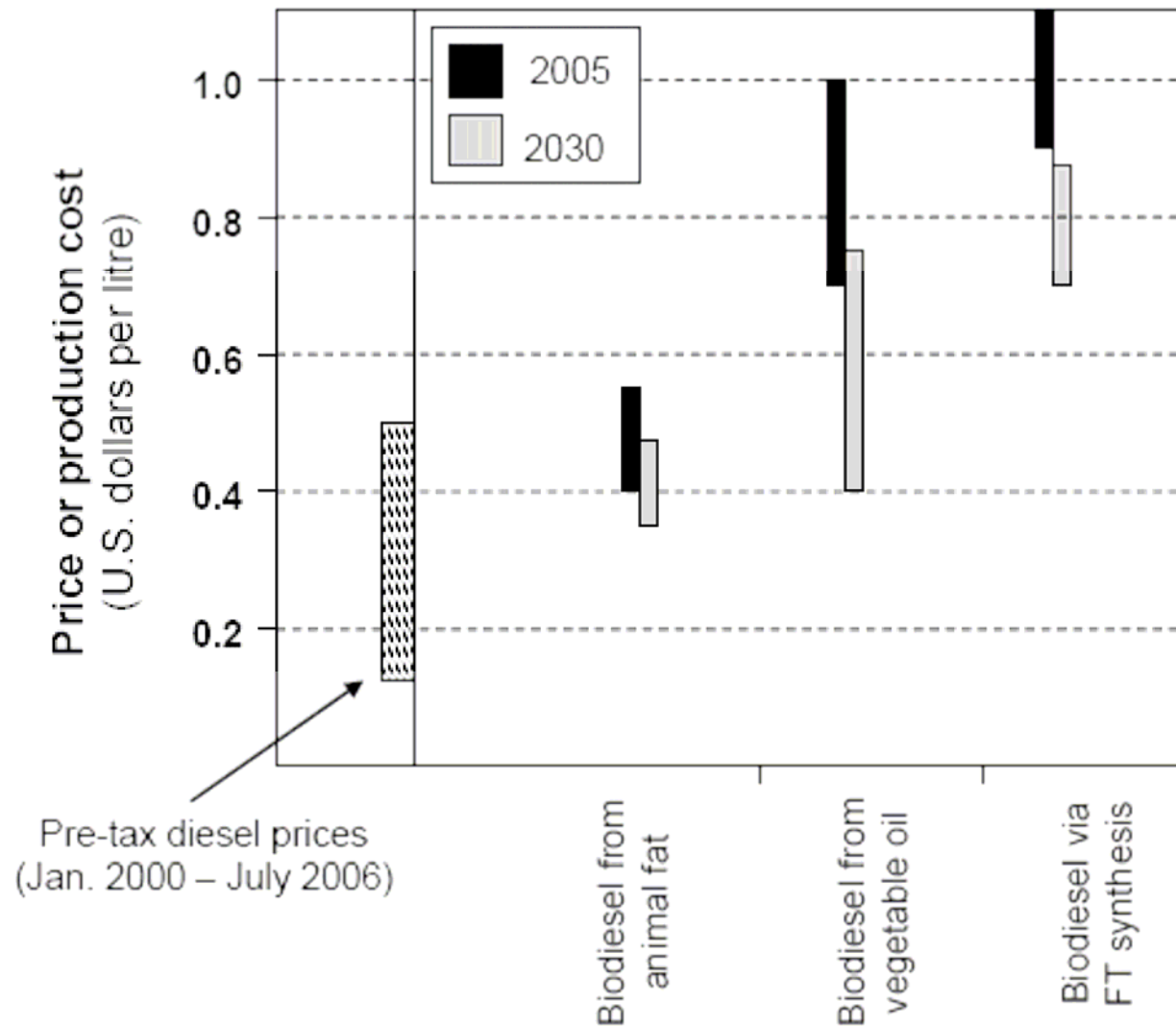


Based on monthly average import prices for crude oil into the IEA region, crude oil import prices varied between \$20 and \$70 per barrel in this period.

Note: Cost estimates exclude from consideration subsidies to crops or to the biofuel itself.

Source: Adapted from IEA (2006), Figure 14.7.

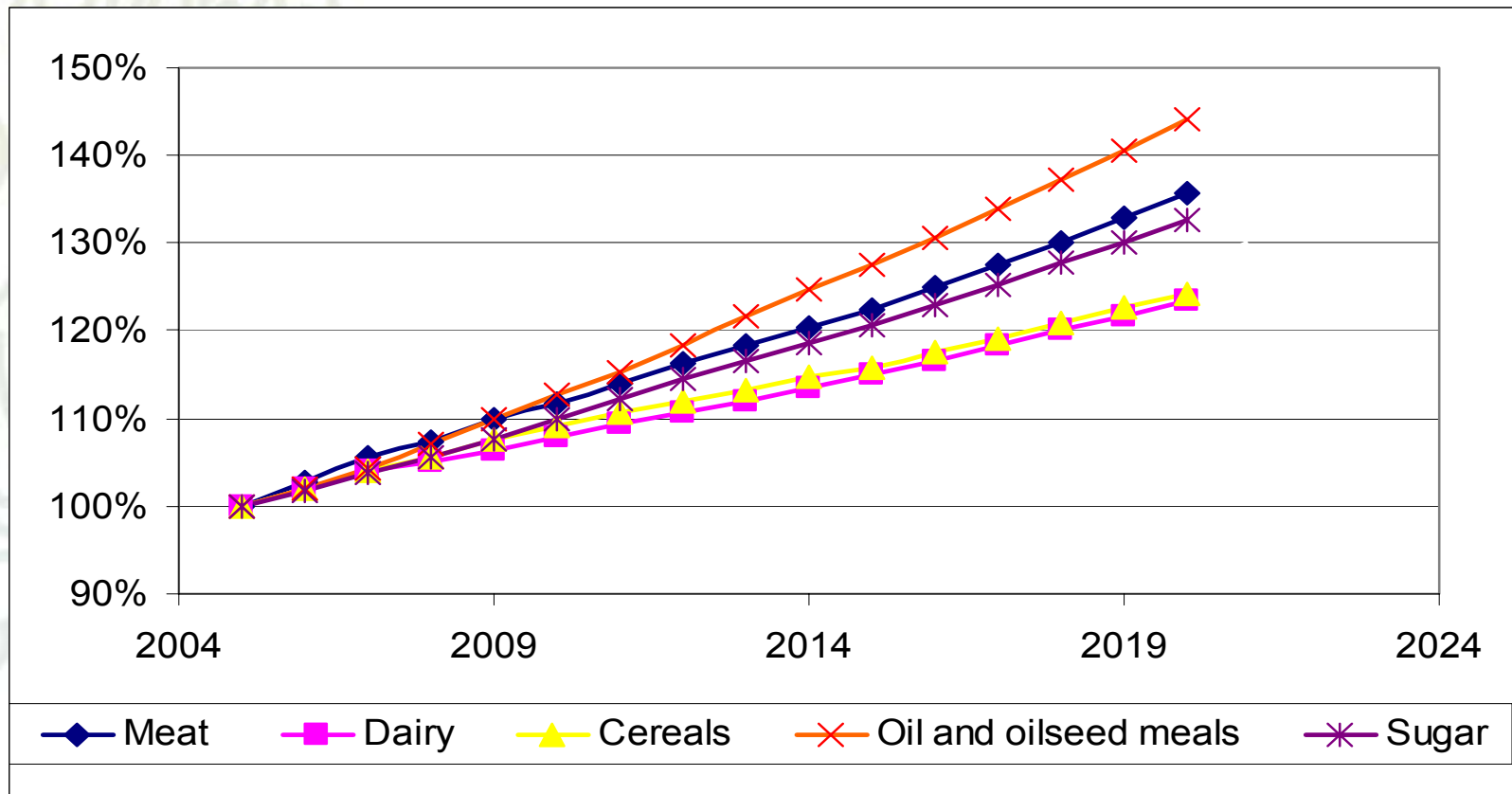
Figure 4. Current and projected future biodiesel production costs, compared with recent (pre-tax) gasoline prices



Based on monthly average import prices for crude oil into the IEA region, crude oil import prices varied between \$20 and \$70 per barrel in this period.

Source: Adapted from IEA (2006), Figure 14.7.

Forecasts for food consumption growth – primarily in China, India and other D&E countries (OECD-FAO, 2006)

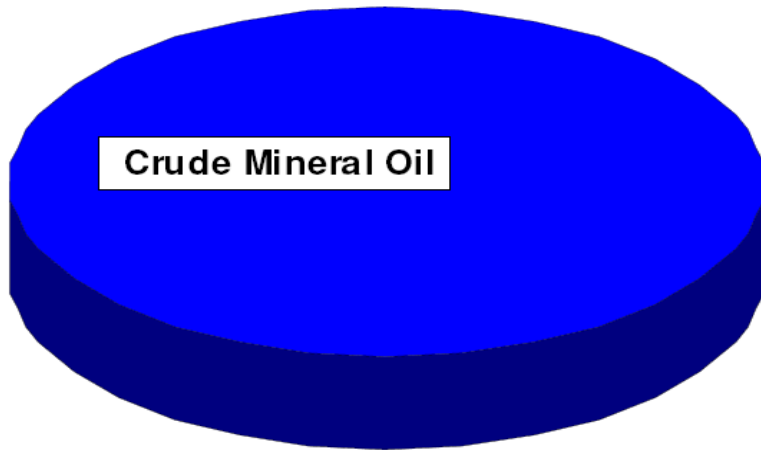


➤ **In 20 years an extra 50% food production is needed !**

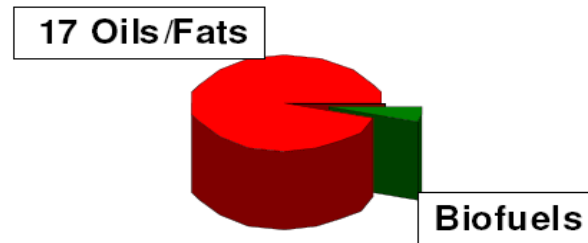
➤ **Without agricultural intensification this will require an additional 2.5 billion ha of land (e.g. 2/3 of the current forest area!)**

World Use of Crude Mineral Oil vs. Veg Oils/ Animal Fats in 2005/06 in Mn T

4252 Mn T



150 Mn T



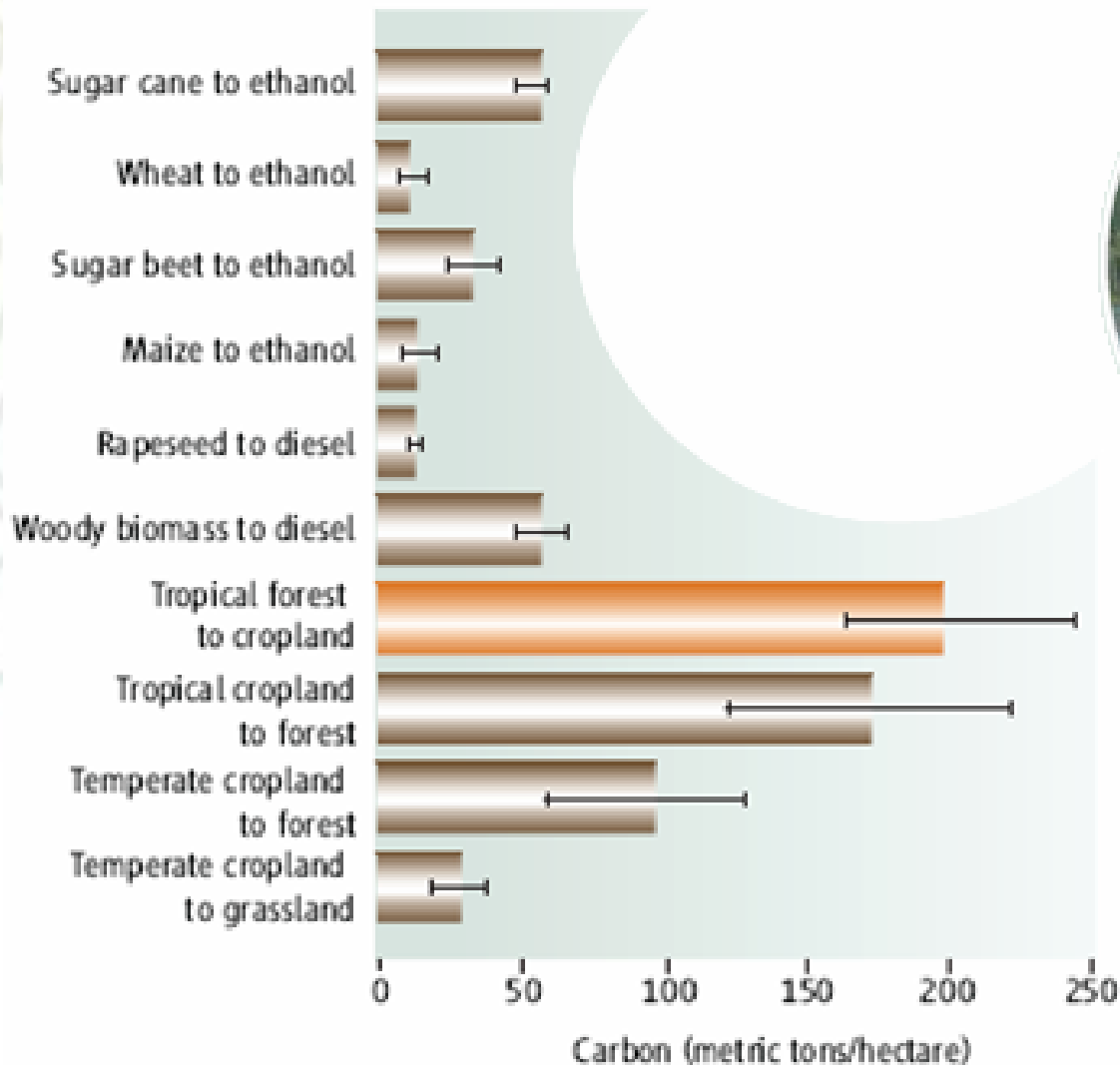
THE IMPACT ON THE FOOD INDUSTRY

- Competition for acreage food-feed-fuel
wheat-corn-oilseeds
- Agricultural production limitations (incl. rotation)
- Demand increase for food/feed in the coming years
- Second generation biofuel is not commercially available yet
 - Additional price inflation (agflation)

THE IMPACT ON THE FOOD INDUSTRY

- Increased cost of raw material
- Increased volatility: low stocks to use ratios
- Will see higher consumer prices depending on product category
- Food Industry will be dependent on the bio-energy policy
- Food security will be a priority policy objective in several developing countries (India, China, Indonesia)

AVOIDED CARBON EMISSIONS



SUSTAINABILITY ISSUES

- Effectiveness to achieve GHG-emission reduction and dependency on fossil fuels.
We believe previous land use should be included.
Biofuels that do not deliver a minimum saving of 50% should not be included in subsidised programmes, nor should they be labelled as sustainable
- Competition with food crops should be avoided, at local and regional level. The fuel dollar of the rich should not compete with the food dollar of the poor
- Biodiversity loss should be avoided: no expansion of crops in fragile habitats

INCREASING BIOFUELS PRODUCTION - KEY CONCERNS

- The availability of raw materials
- The (unintended) consequences on global food security have not been included in most biofuels support programmes. Prices of several crops have doubled recently. What will happen with the further expansion of the biofuels industry?
- Do we choose the right biofuels?
We support bio-energy applications that have proven well-to-wheel sustainability and energy efficiency performance. We must discourage the use of environmentally, socially and economic harmful biofuels
- Environmental impact (GHG-emissions, eco-systems) could become negative if the biofuels boom results in deforestation or the transition of grasslands