

Food versus Fuel –

Revisited !

Agenda

- What's happened in the past year?
 - The news
 - Commodity markets
- So who or what is to blame?
 - Cereal use for biofuels in US, China and EU?
 - Policies, weather and a market failure?
- It is Agriculture that matters for Food, Feed Fibres and Fuels

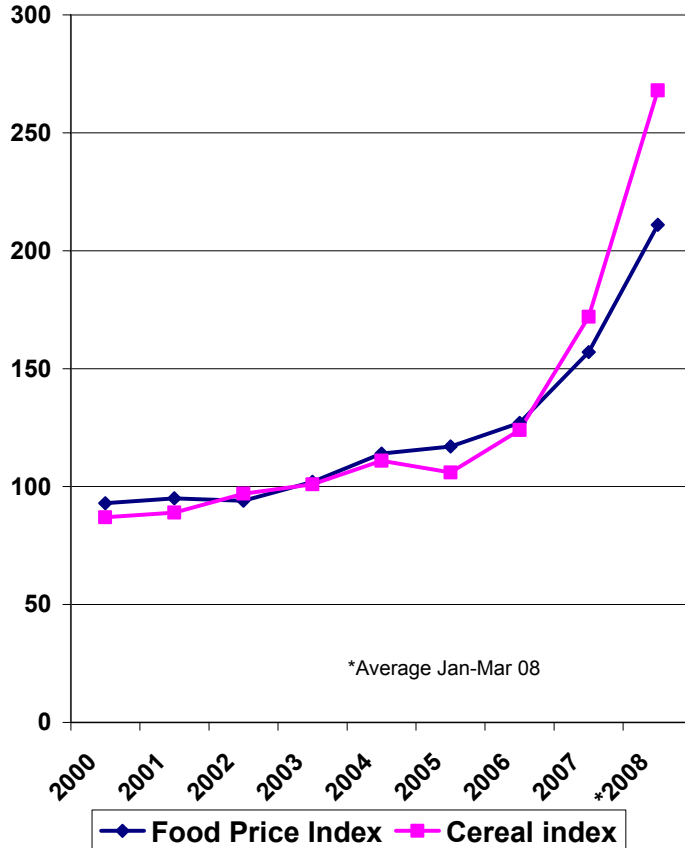
Biofuels – a “criminal path”

“The United States and the European Union have taken a “criminal path” by contributing to an explosive rise in global food prices through using food crops to produce biofuels” - April 2008



Jean Ziegler - United Nations special rapporteur on the right to food

Has he got a point?



In the past year

- The FAO cereal price index rose by 77%
- World cereal use for bioethanol rose by 20 Mt

“silent tsunami” FAO



World Food Programme
Executive Director
Josette Sheeran

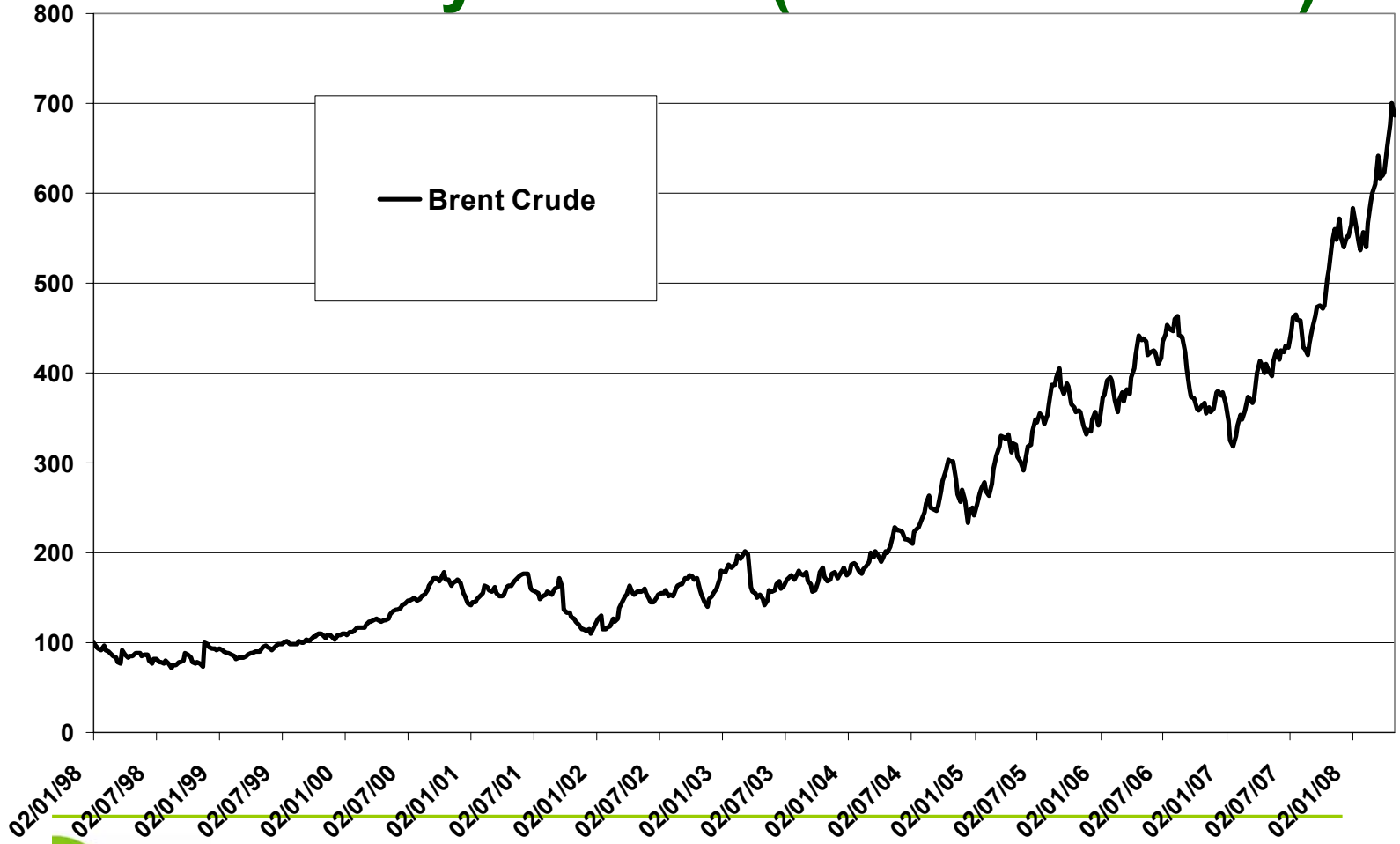
“..high food prices are creating the biggest challenge that WFP has faced in its 45-year history, a silent tsunami threatening to plunge more than 100 million people on every continent into hunger”

“This is the new face of hunger – the millions of people who were not in the urgent hunger category six months ago but now are” - April 2008

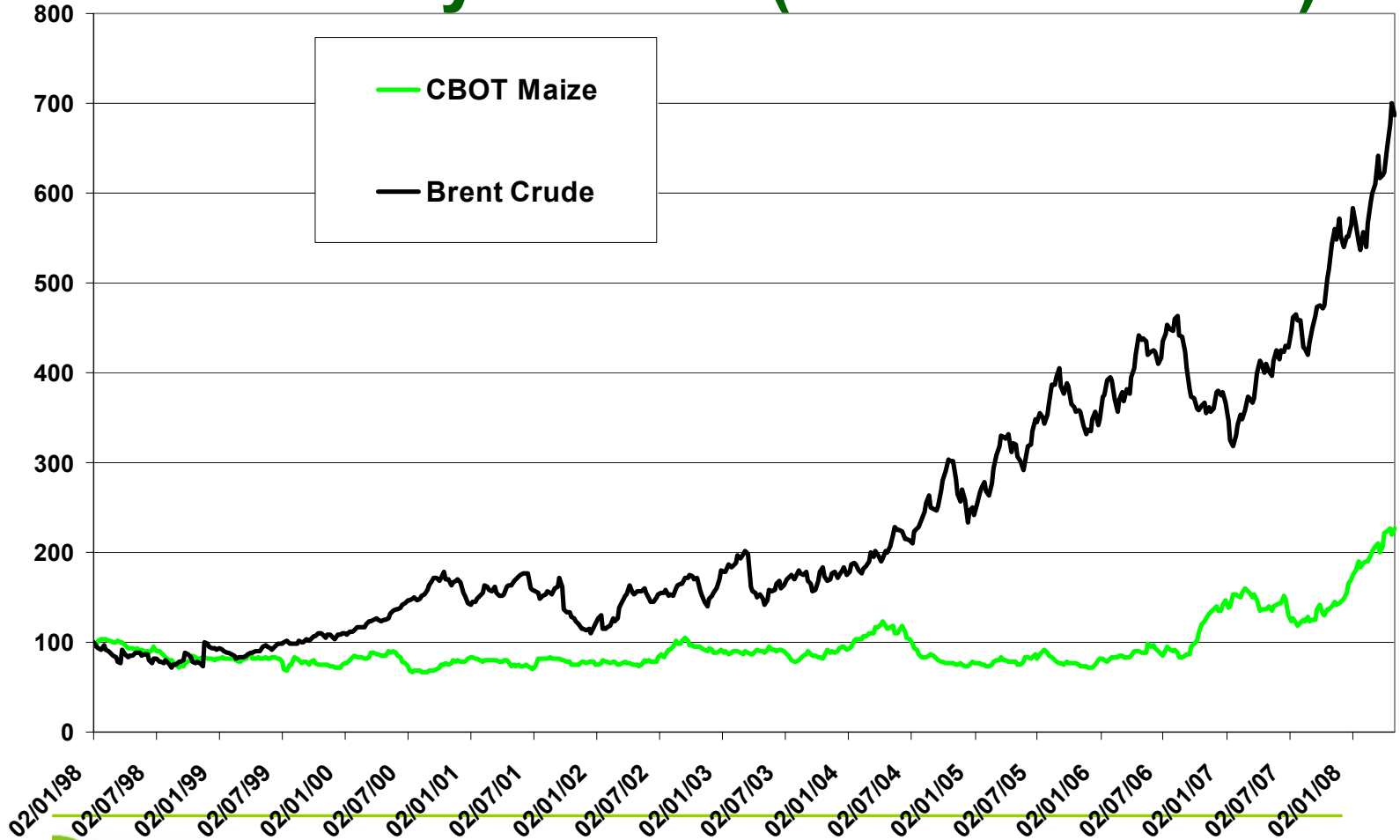
Food riots have broken in Egypt, Ivory Coast, Senegal, Yemen, Haiti, Bangladesh and Mexico

Commodity price movements tell
the story - *mismatch between
demand and supply*

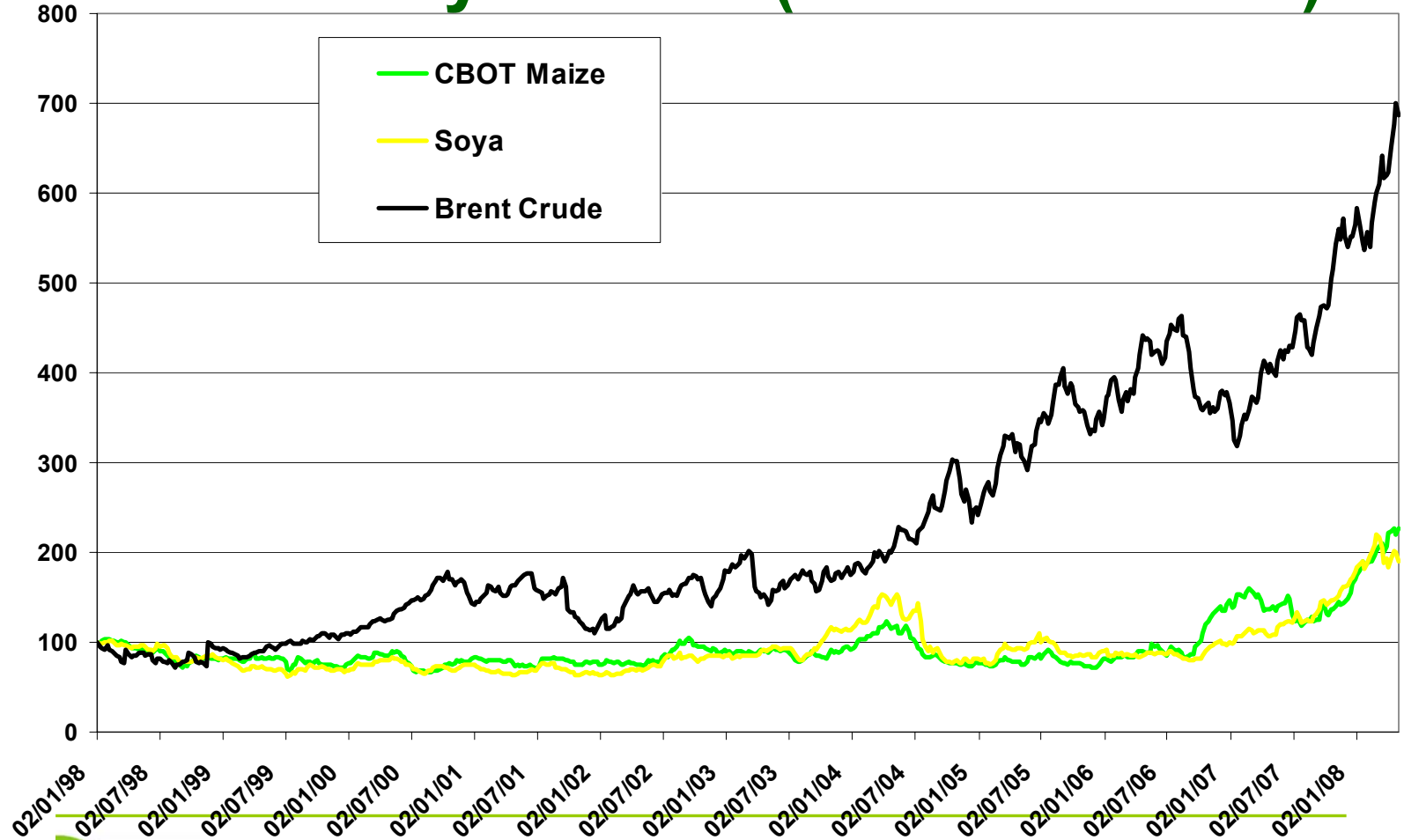
Commodity Indices (Jan 1998 = 100)



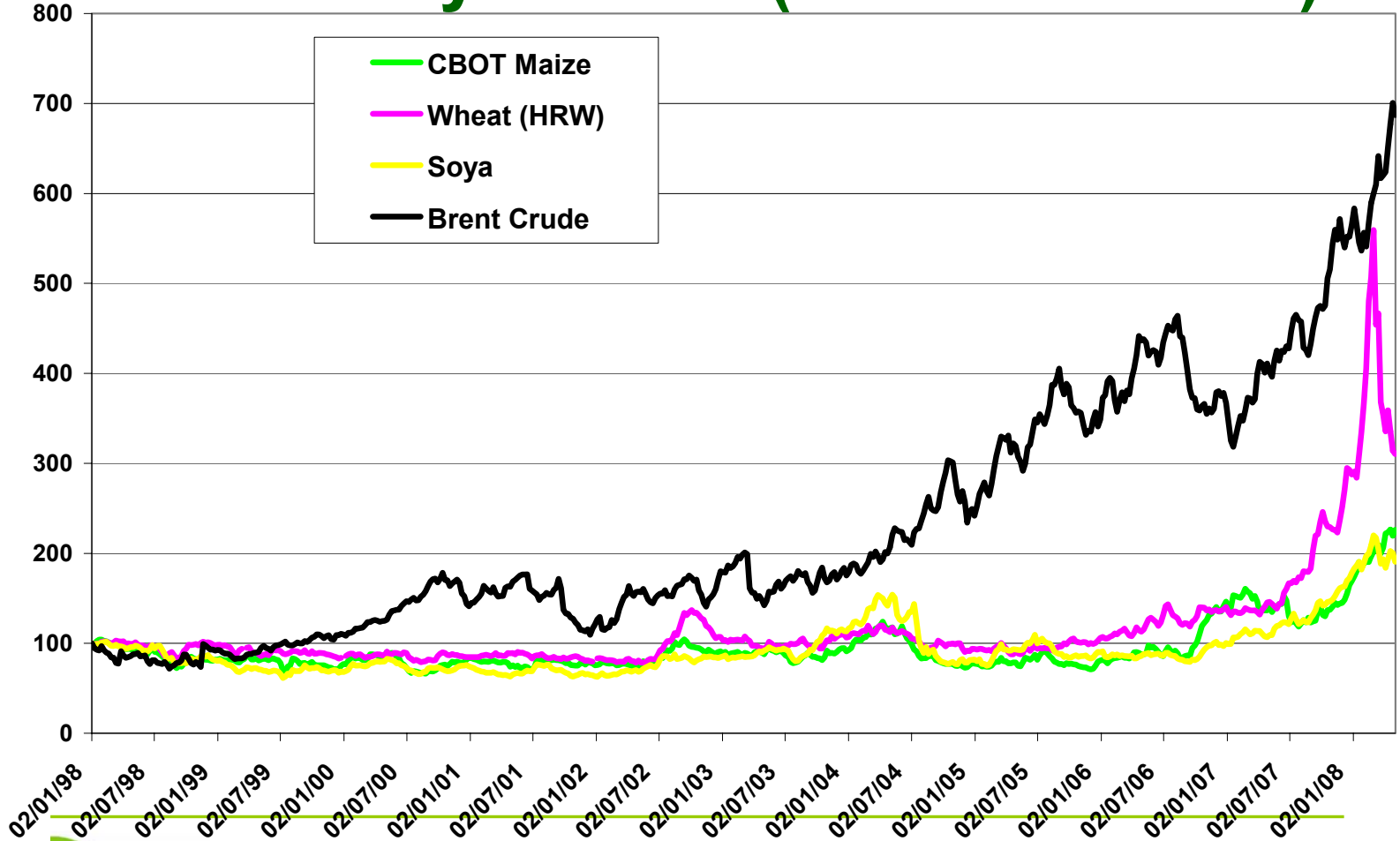
Commodity Indices (Jan 1998 = 100)



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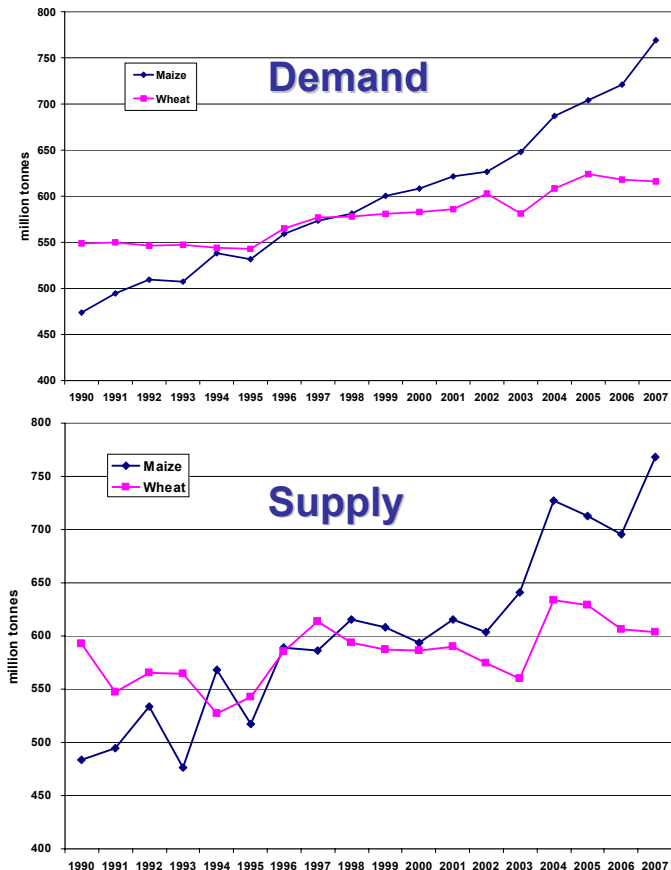


Commodity Indices (Jan 1998 = 100)



So who or what is to blame?

- Prices determined by the balance of supply and demand
- Cereal demand (1990-2007)
 - Maize by +15.5 Mt / year
 - Wheat by + 4.9 Mt / year
- Cereal production (1990-2007)
 - Maize by +14.8 Mt / year
 - Wheat by + 3.2 Mt /year

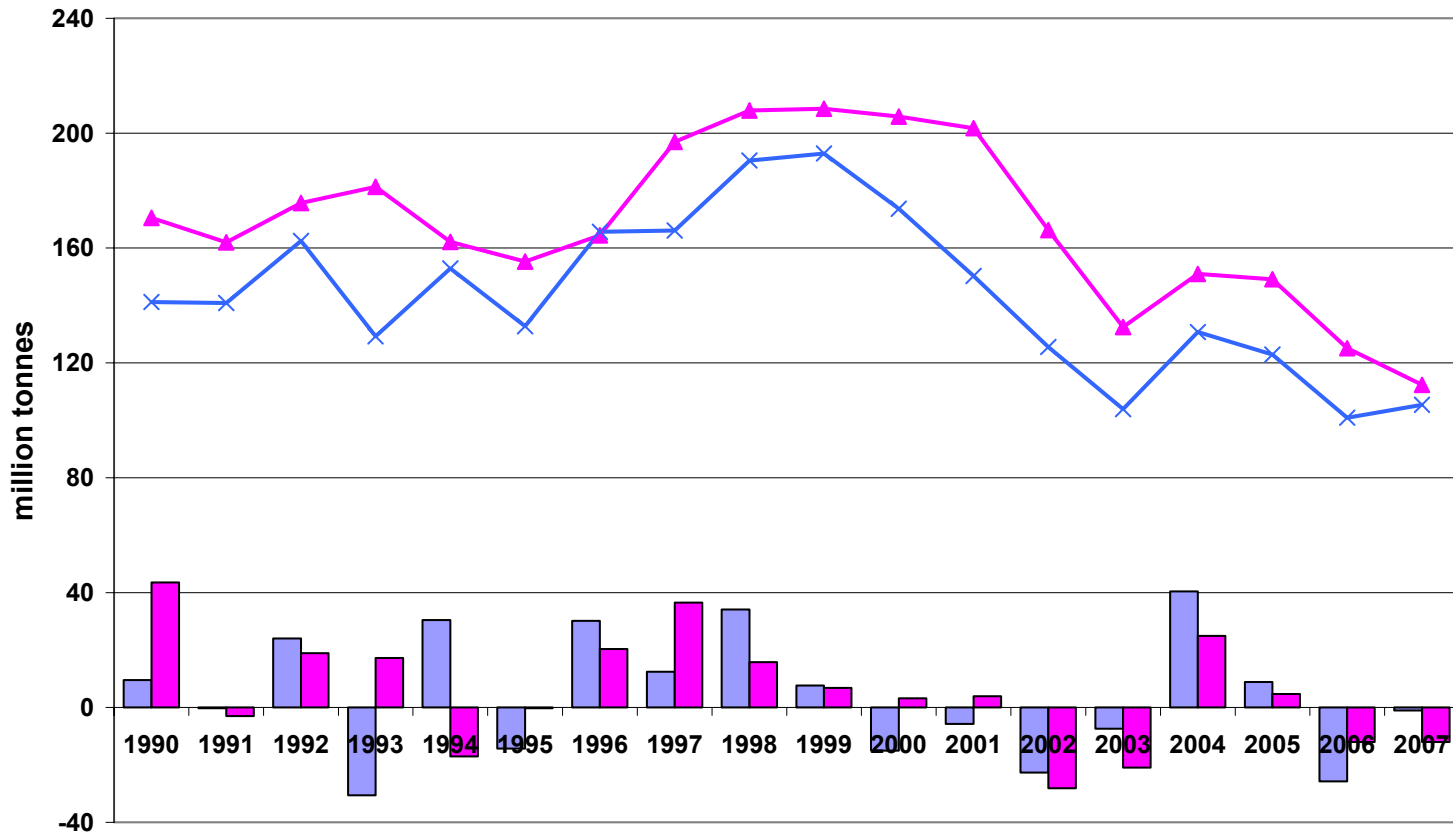


Production falling behind demand

Maize by 0.7 Mt/yr Wheat by 1.7 Mt/yr

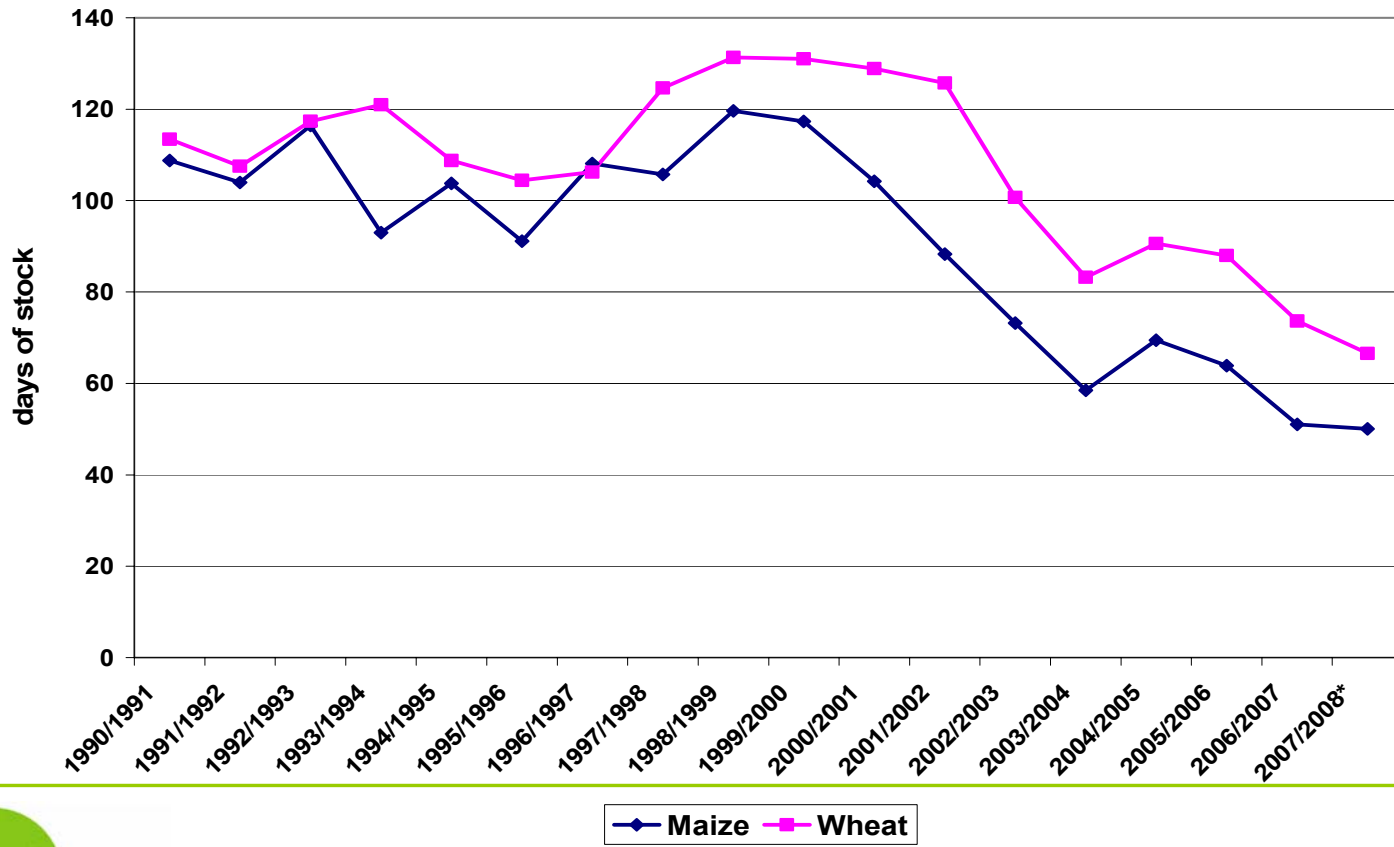
World Biofuels 2008

World maize & wheat surpluses, deficits & stocks 1990-2007



■ Maize
 ■ Wheat
 ▲ Wheat stock
 × Maize stock

Cereal stock to use ratio - days



*So can we blame the countries
that use cereals for bioethanol?*

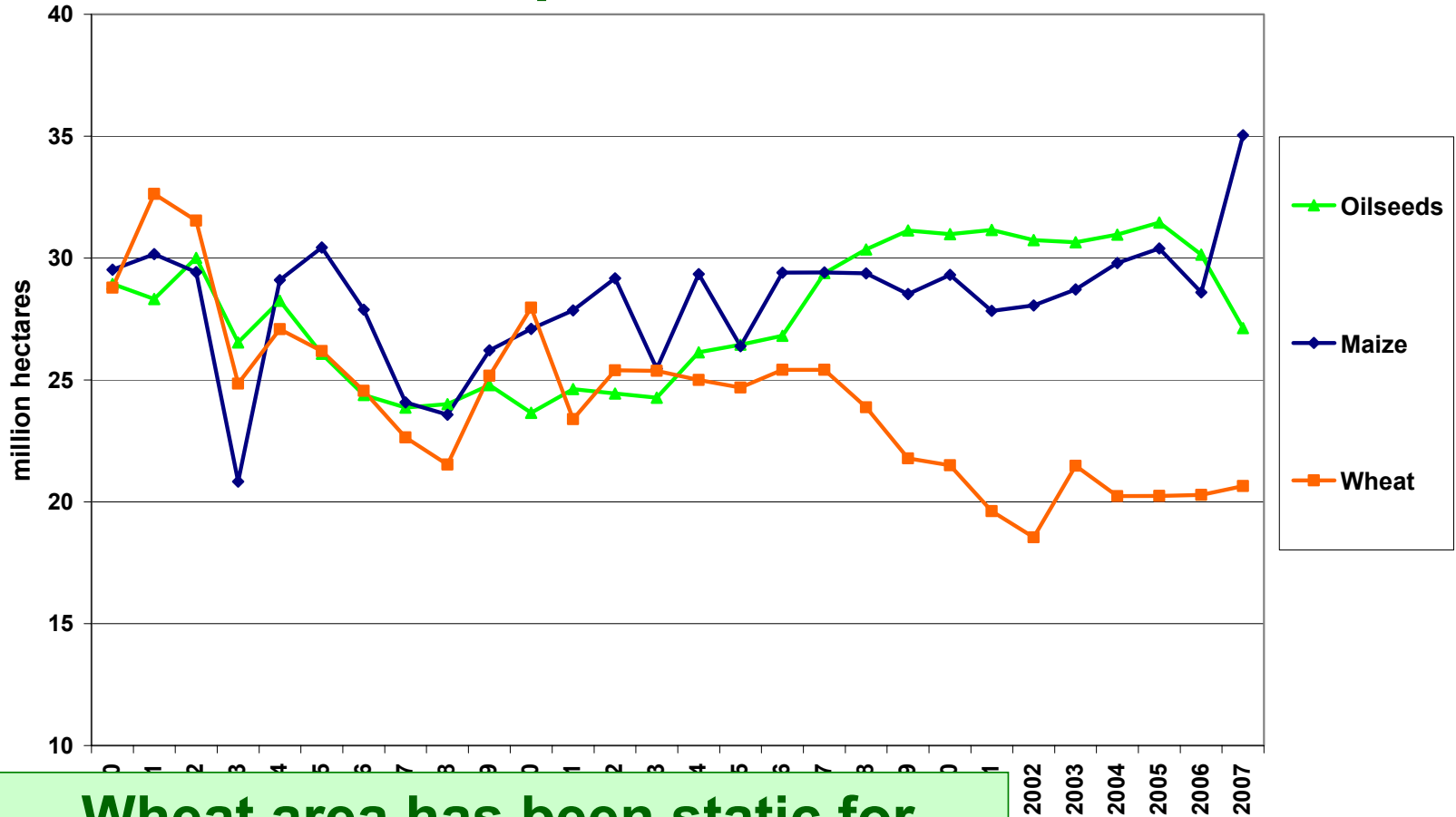
**Let's look at the biggest cereal
bioethanol producers – USA,
China and the EU**

Cereal usage – top 3 ethanol producers

Million tonnes	2006/07*	2007/08**	Change	Source
USA	44.8	62.6	17.8	FO Licht WEBR Mar-08
China	3.5	4.0	0.5	FO Licht WEBR Mar-08
EU27	2.5	1.9	-0.6	DG AGRI Prospects Mar- 08
Other	1.6	3.8	1.6	
World	52.4	72.3	19.9	FO Licht WEBR Mar-08
Cereal Production	2,009	2,109	100.0	FAO Food Outlook Nov-07

Has the USA stopped wheat production for food in favour of maize for ethanol ?

US Crop areas 1980 – 2007



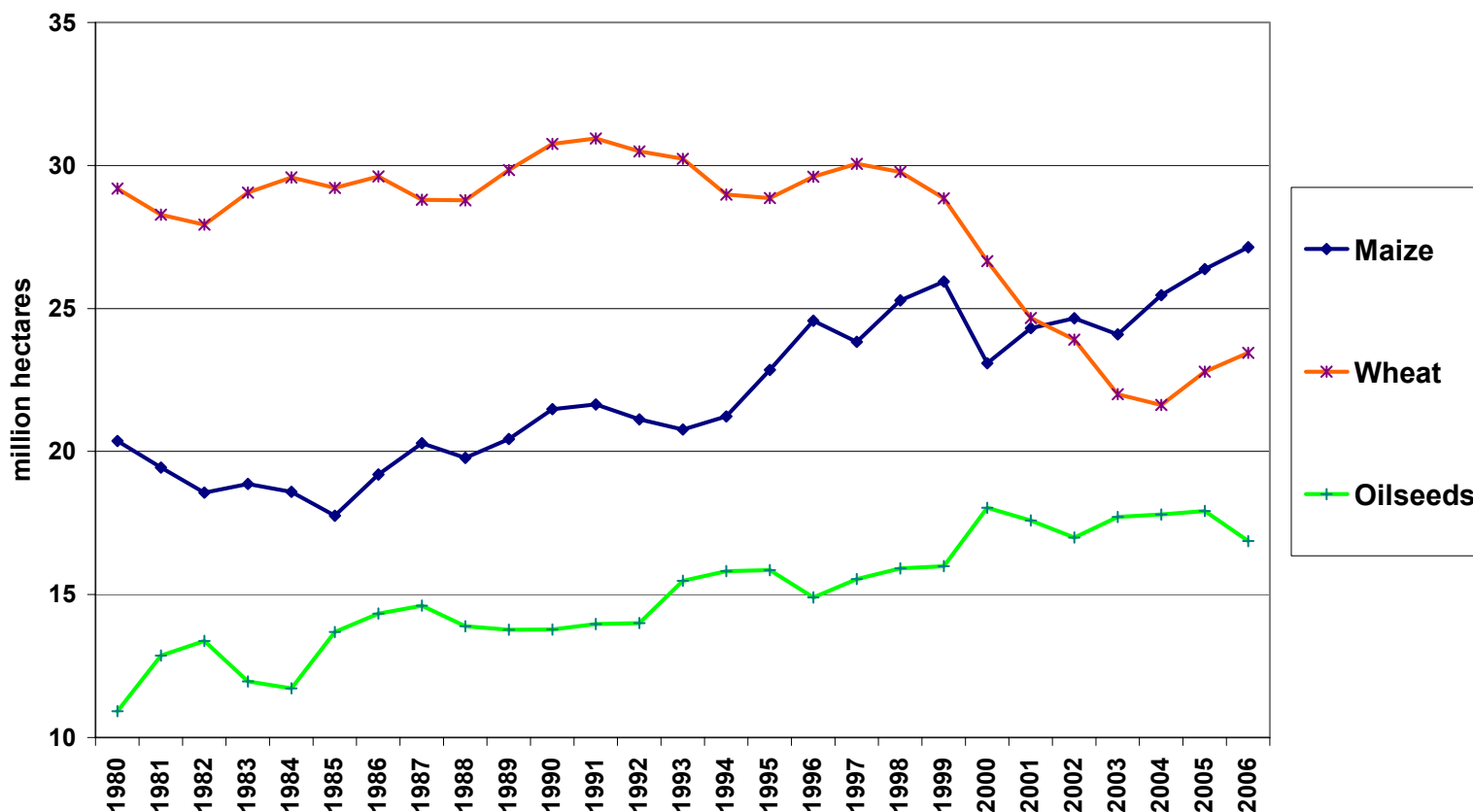
Wheat area has been static for about 8 years – it was soya that was displaced by maize

Source: FAOSTAT Database
(2007 data from USDA)

World Biofuels 2008

China has reduced its wheat area by more than 20% to produce maize & oilseeds – has it sucked in imports?

China – Crop areas 1980-2006

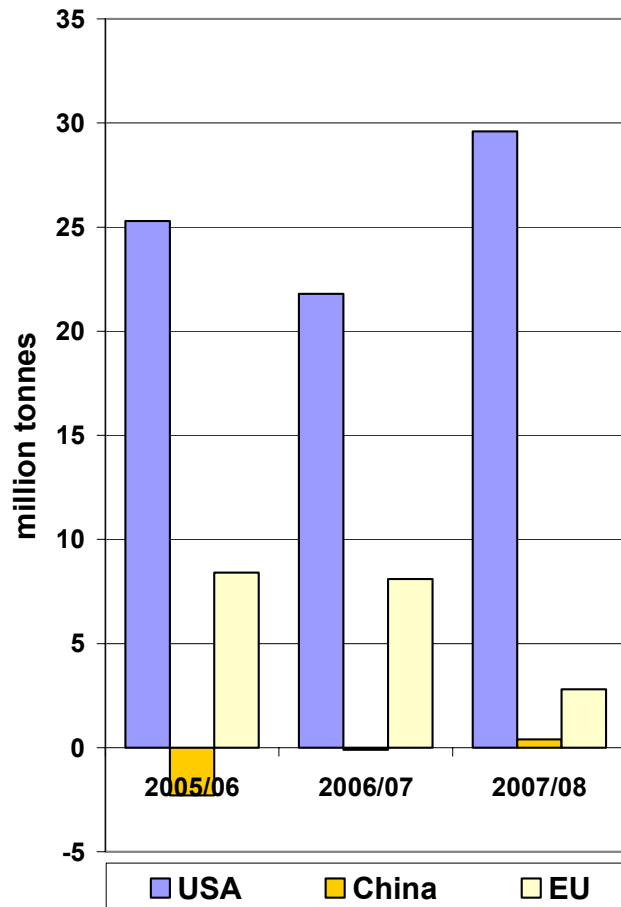


Source: FAOSTAT Database

Despite the fall in wheat area China is still self-sufficient in wheat

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Net wheat exports 2005-2007



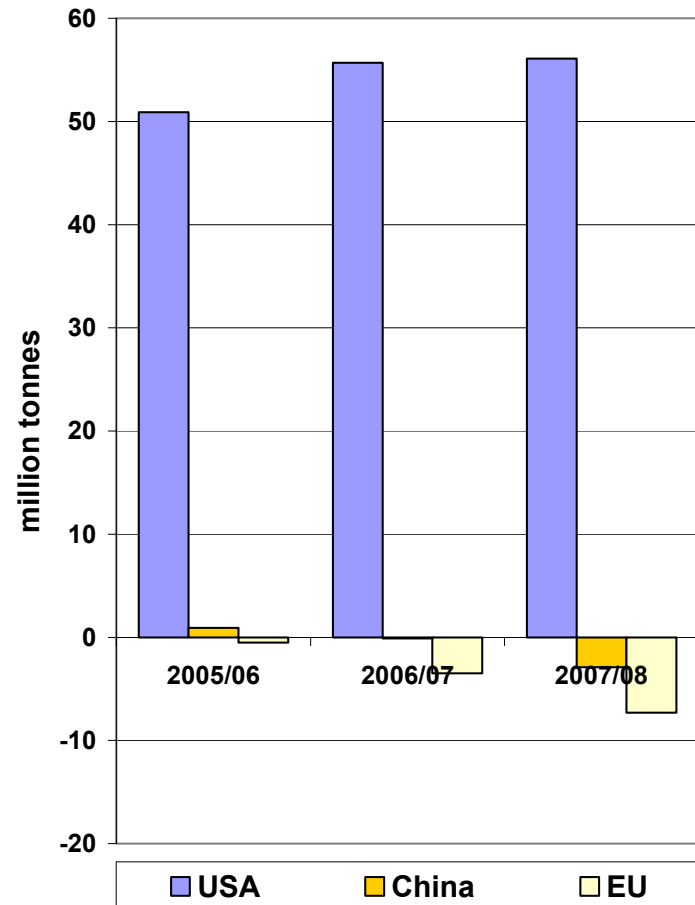
- USA increased exports
- China moved from imports to small exports
- EU reduced exports

Sources: USA & China from FAO Food Outlook Nov-07, EU data from DG AGRI Prospects Mar-08

Net maize exports 2005-2007

- USA increased exports
- China went from small exports to small imports
- EU increased imports

Sources: USA & China from FAO Food Outlook Nov-07, EU data from DG AGRI Prospects Mar-08

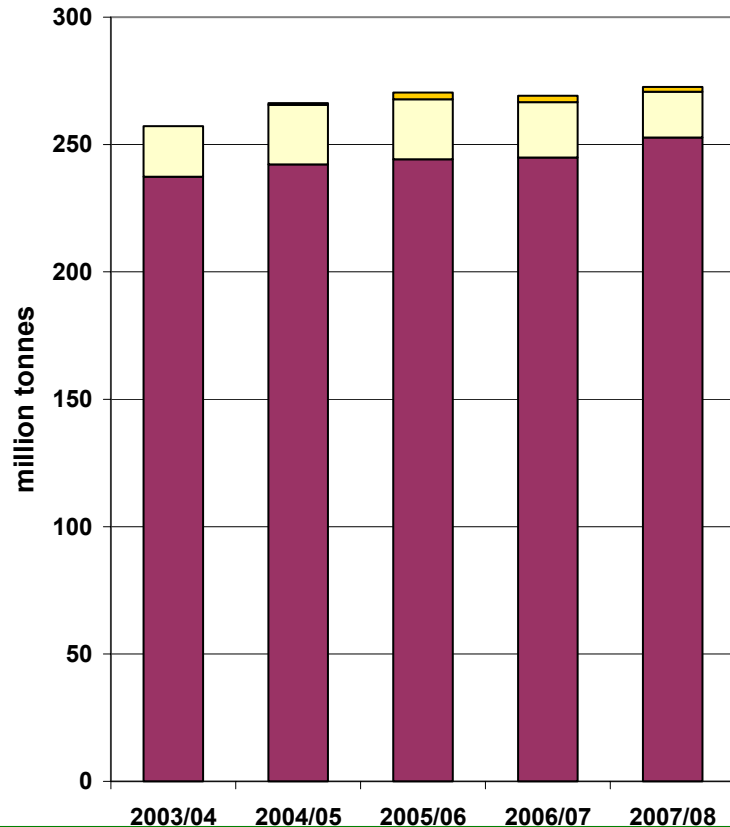


Europe did contribute to world price increases – because of poor harvest

Between 2005 and 2007 Europe:

- Reduced net wheat and maize exports by 5.4 Mt
- Increased imports by 7.0 Mt
- Produced bioethanol from cereals
 - But was that significant?

EU cereals



EU25	04/5	05/6	06/7	07/8
Production	286	253	242	245
Cereal use for ethanol	0.7	2.7	2.5	1.9

➤ Usage of cereals for ethanol was insignificant (max 1.06%)

But cereal production fell by 33 Mt in 05 and another 11 Mt in 06 and failed to recover in 07

Source: DG AGRI Prospects Mar- 08

World Biofuels 2008

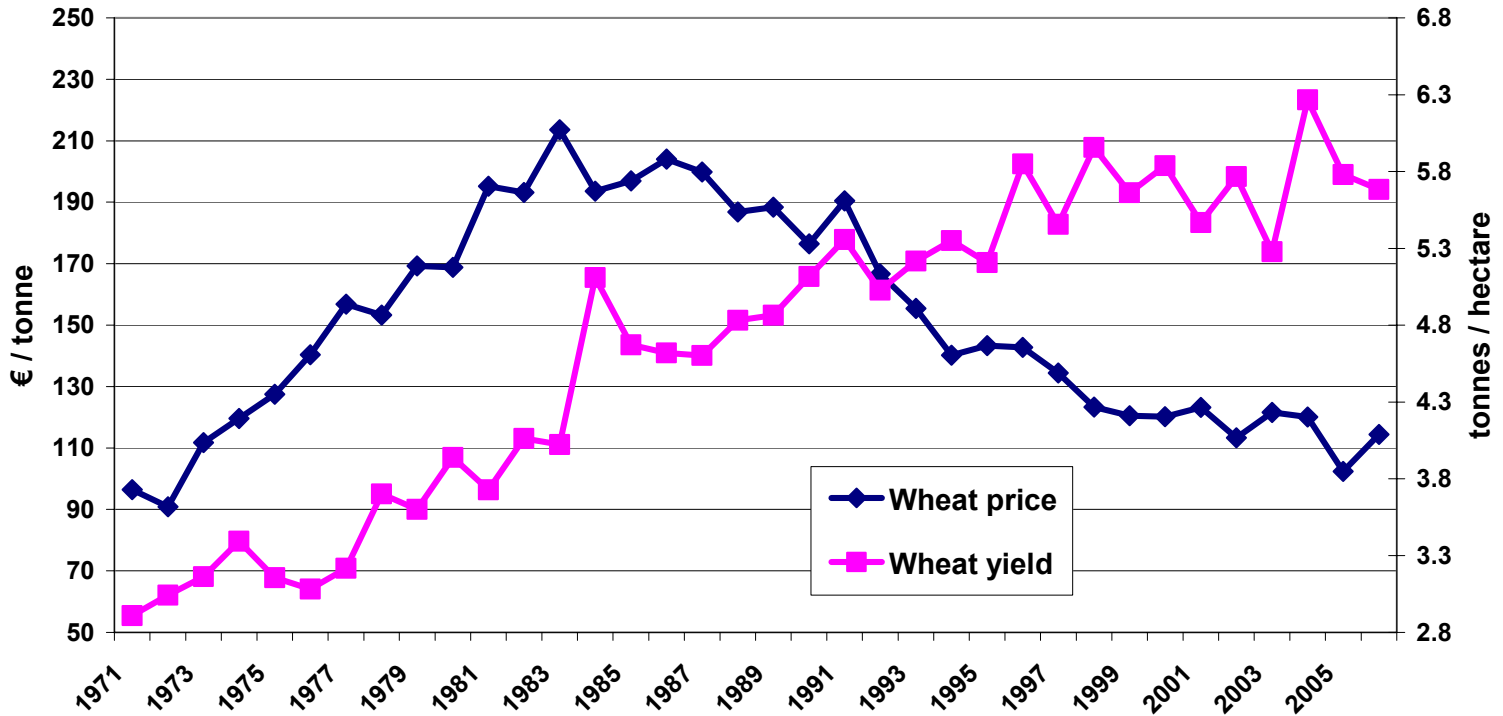
Reasons for high prices

- So we can't blame cereal bioethanol production in China or US for the world price rises as they continued to maintain their export/import position
- Europe's cereal demand for bioethanol was small and falling as prices increased
- So we come back to cereal production failing to match increased demand

Why hasn't world cereal production kept up with demand?

- Lower crop areas
 - Government policies to reduce food production
 - EU 7 million hectares in set-aside
 - US 15 million hectares in CRP
 - Loss of land in former Warsaw pact countries
 - In Russia, Ukraine & Kazakhstan 23 million hectares arable land left idle after 1990
- Lower crop yields
 - Low prices
 - Weather problems

EU15 weighted farm gate wheat price vs yields 1971-2006



OECD Stats

EU Wheat yields levelled off when prices fell from early 1990's

World Biofuels 2008

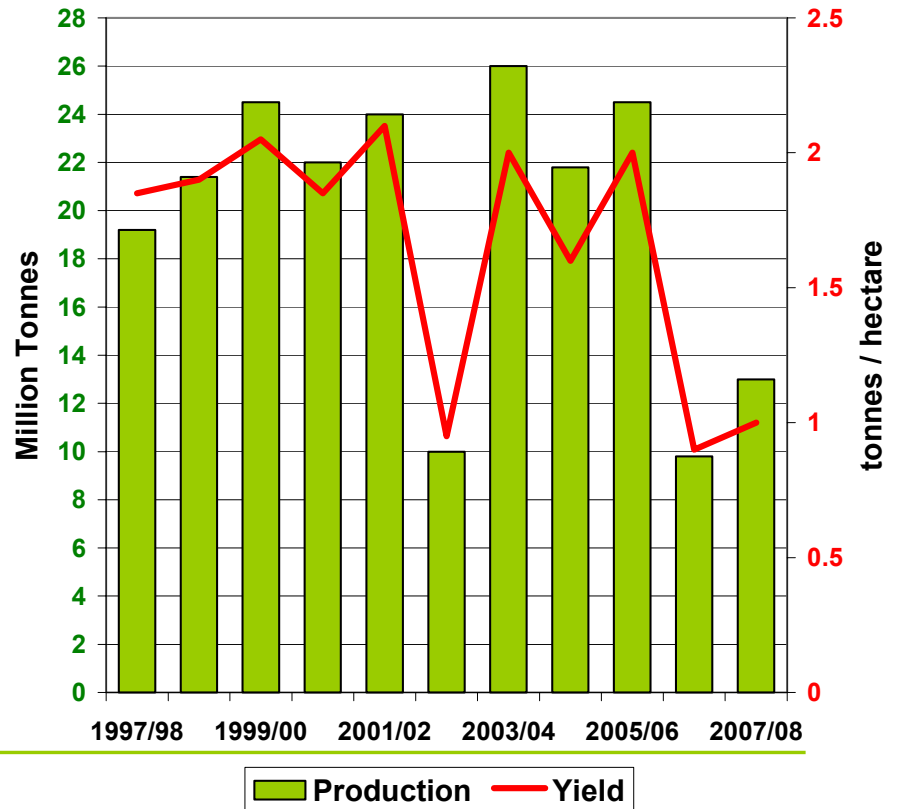
So why did prices rise?

Production falling behind demand for a decade

Stock levels falling so that there was less cushion to withstand supply shocks

Supply shocks when two consecutive Australian harvests were devastated by drought and Europe had below average harvests

Australian Wheat : Production and Yield



...then matters were made worse

- A new breed of speculators took large positions in the grain markets – hedge funds
- Exporter governments decided to introduce export taxes and quotas – Ukraine, Russia, Kazakhstan, Argentina, etc.
- Importer governments lowered import tariffs – EU, India, etc
- Shipping freight rates rose to record levels – Up 80% in a year
- Energy costs hit all parts of the supply chain – especially on farm – N fertiliser up >100%, fuel up >40%
- April 08 China imposed export tax of up to 135% on fertiliser

Now India proposes banning Futures trading in food crops - Dumping the main risk management tool !

Who or what can be blamed for cereal price increases?

- Grain traders for failing to recognise the trends early enough to send the price signal to growers
- Governments that continued supply control measures when the demand trends were clear
- Governments that introduced “beggar my neighbour” policies
- China by tying up ships to deliver all types of commodities
- OPEC for failing to increase production in response to higher oil prices
- Weather problems that reduced the harvests

But, most of all, cereal prices were too low for too long.

The supply response is coming

Food Vs Fuels – is it really an issue ?

- ❖ The Yield charts tell the whole story
- ❖ When prices rise growers, in a free market, produce more

Do not underestimate the ability of agriculture to respond to biofuel demand.

In the next couple of years world stocks will rebound & then there will be another story hitting the headlines !

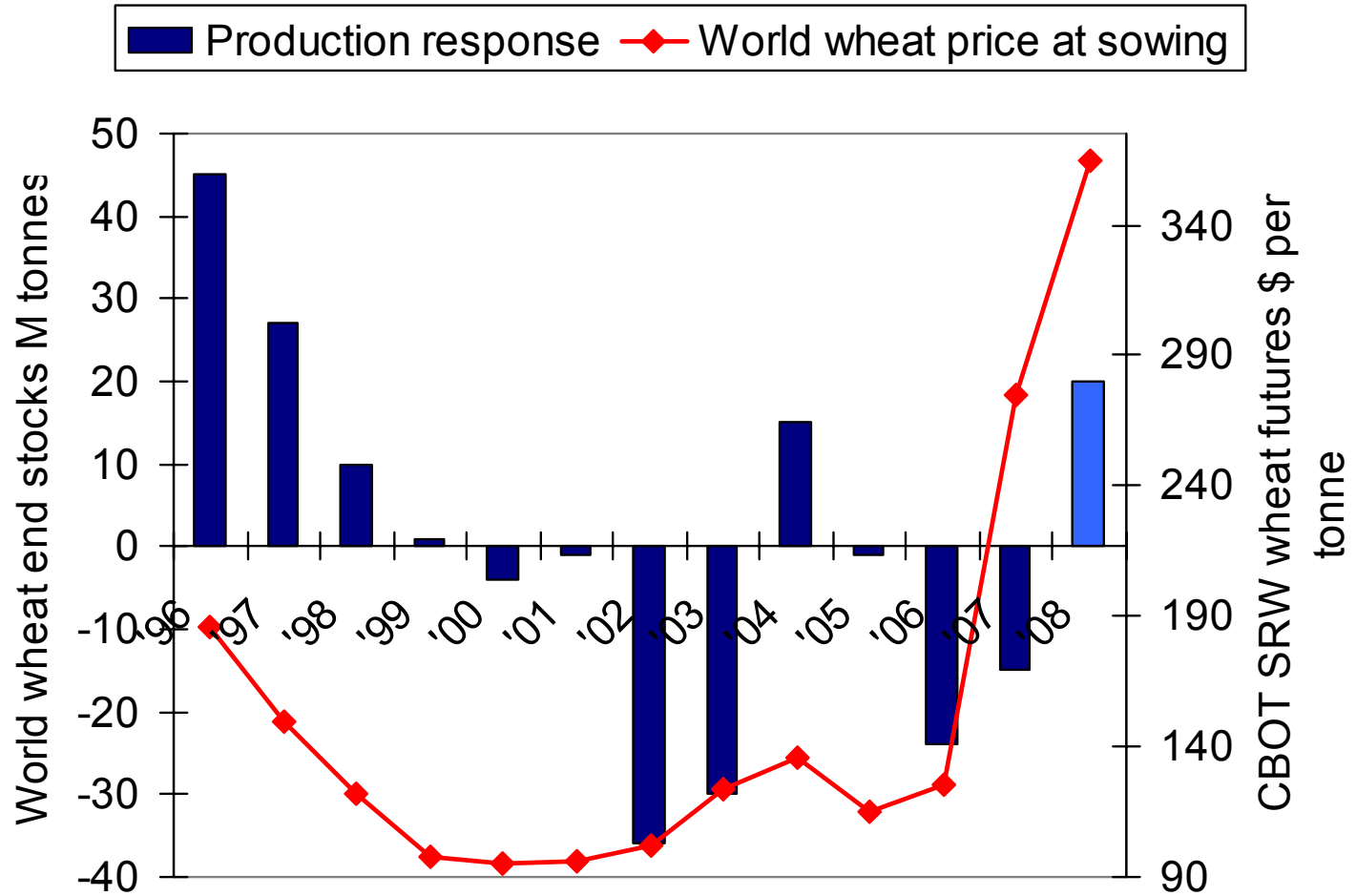


World Biofuels 2007

- Farmers did not have time to respond for the 2007 harvest
- They were limited in what they could grow on set aside
- The weather hindered production



World Biofuels 2008



Source: HGCA

FAO 2008

World harvest prospects – Apr-08

- Cereal production is to increase 2.6% to a record 2 164 Mt
- LIFDCs - only marginal increase. Apart from China & India, LIFDC output is forecast to decline slightly.
- In Southern Africa output is forecast to increase sharply
- In North Africa, a strong recovery of winter cereal production is expected
- In Asia, prospects for the 2008 wheat crop are favourable but outputs are forecast below last year's record levels
- In South America, a record 2008 maize crop is being gathered
- In Central America, a good wheat crop is expected in Mexico.

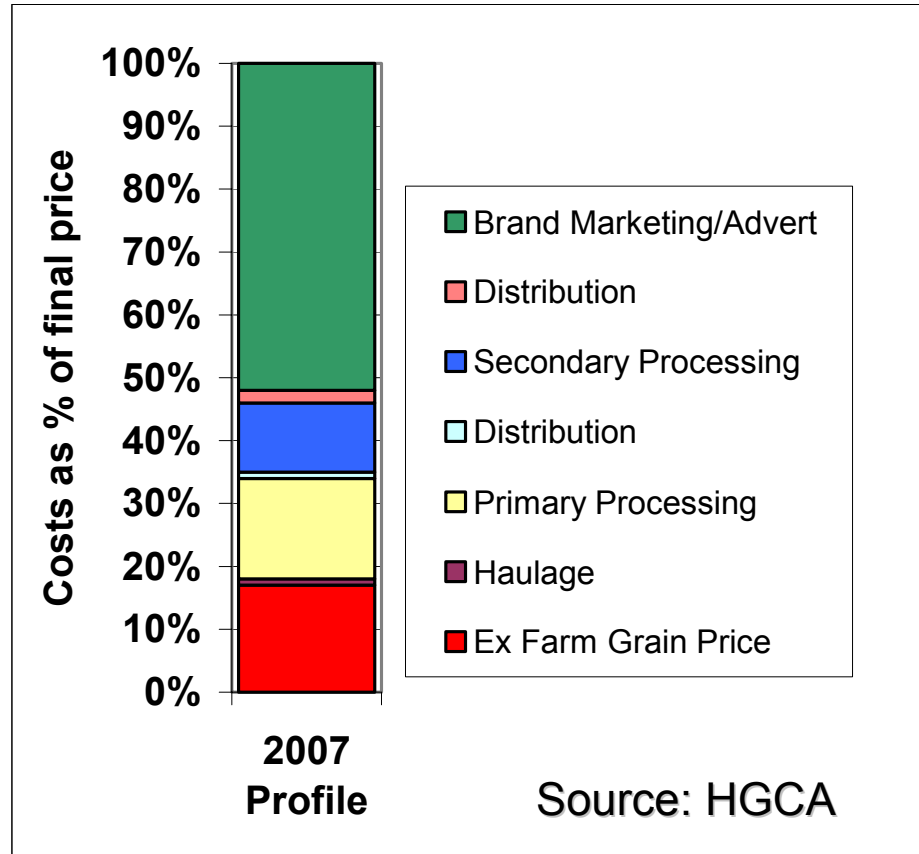
If the 2008 crop materialises the current tight supply situation could ease

Bioethanol's impact on the cereal market is <math><2/3^{\text{rds}}</math> of the 3.4% of feed cereals used

- The cereal bioethanol industry will this year supply 25 Mt/yr of high protein feed ingredients to enter the food chain.
- A proportion of the grain within Europe was from land that was not permitted to grow food crops.

Cereal prices do not = food prices

- Before cereals are consumed they need to be processed
- Within Europe >80% of the final consumer food cost is from other factors
- For bread the >95% of cost is non-cereal



Fossil energy is used in all parts of the supply chain and causing cost inflation

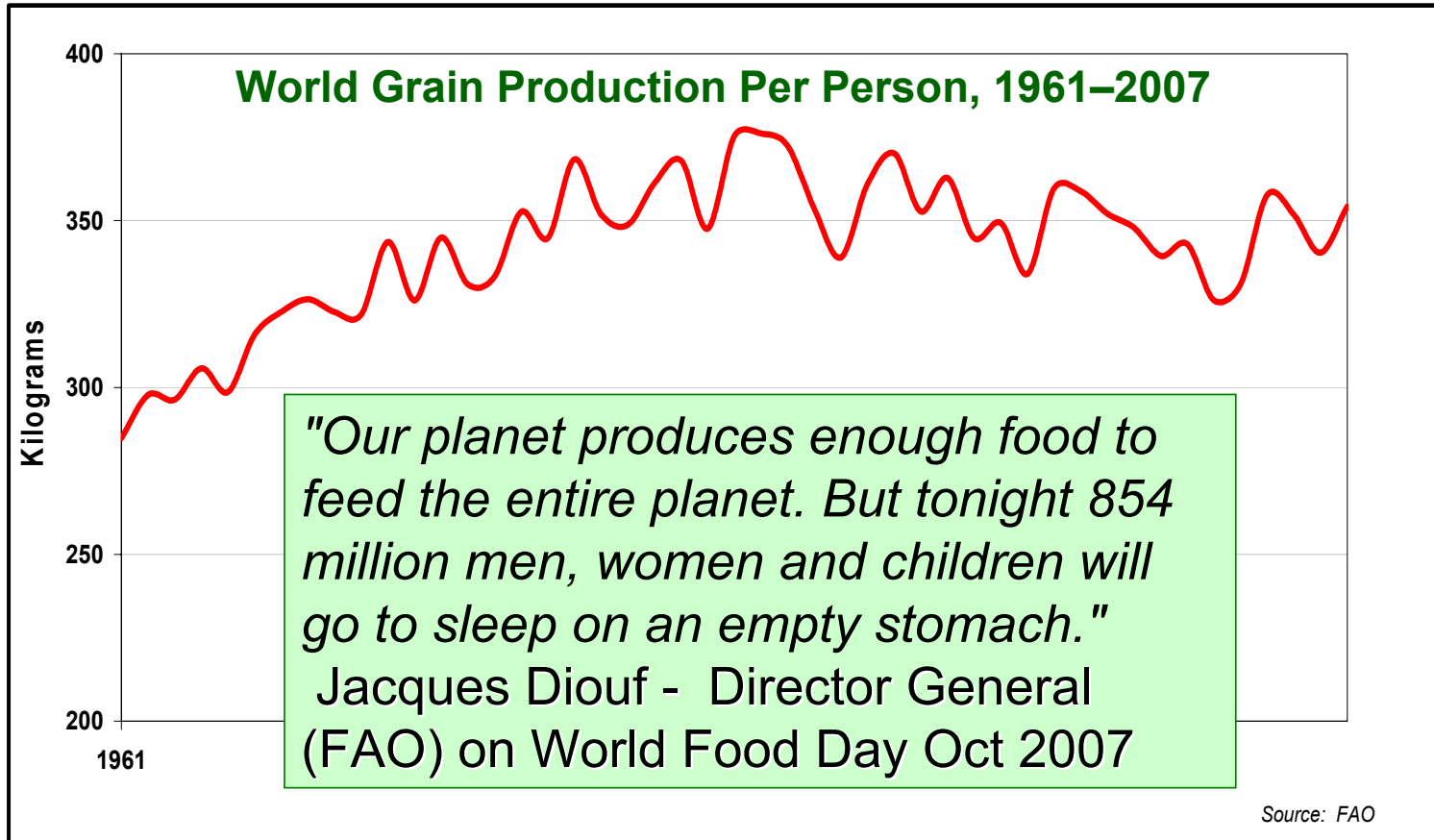
Biofuels 2008

Food prices: grain price is only part of the story

- In Europe bread increased 10 per cent between February 2007 and 2008, while the near-doubling of the price of wheat should have led to only a 3 per cent rise. DG AGRI – April 2008

"Energy, transport and labour costs have risen. But it is possible that somewhere along the food chain someone may be doing well out of this. We are not drawing conclusions; we are just presenting facts." Commissioner Mariann Fischer Boel – April 2008

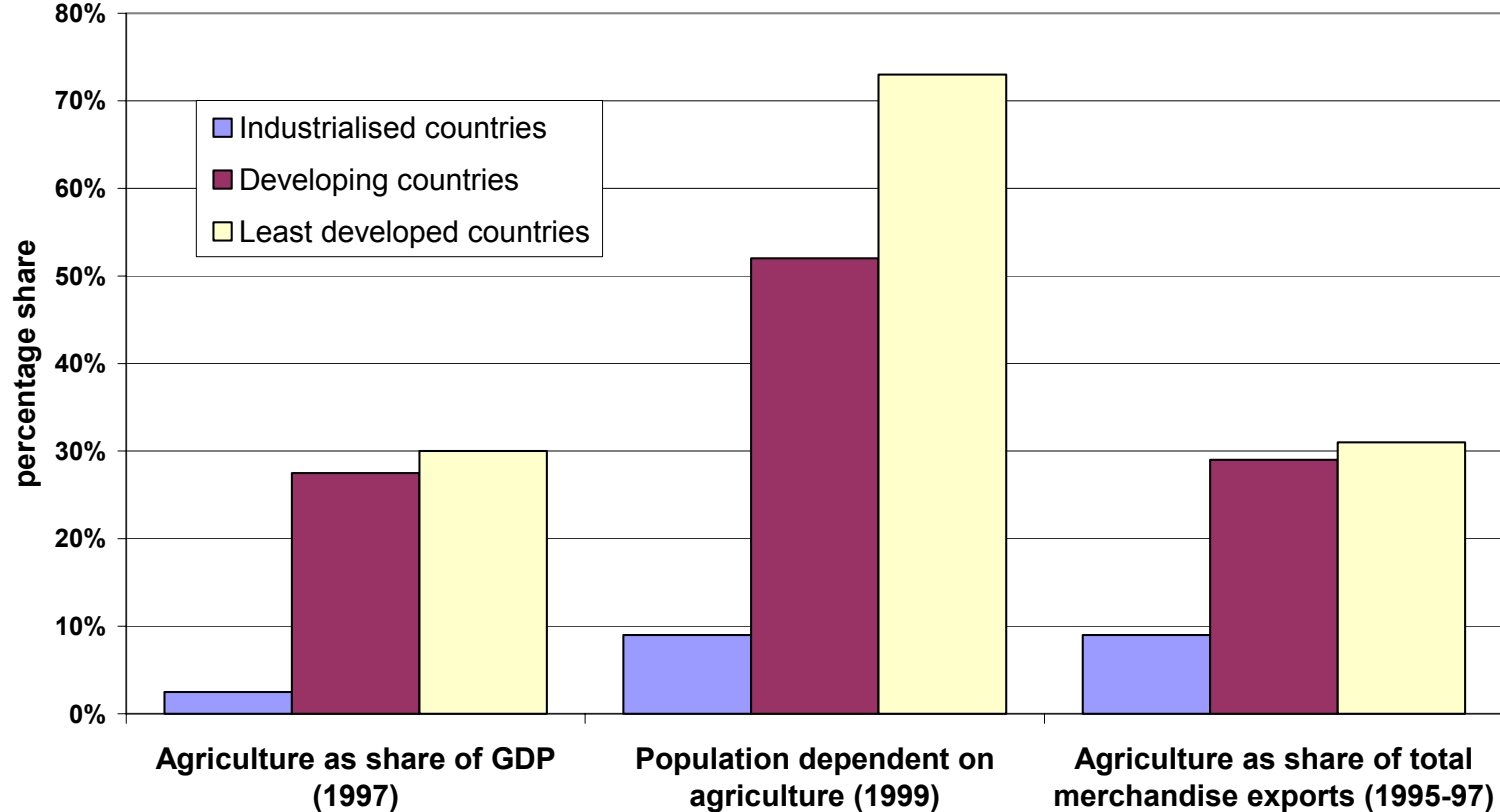
Food crisis: is food short or is Poverty the problem?



Food Price shock = an Opportunity

- The price shock reminds the world that agriculture matters
- An opportunity to reinvigorate agriculture that has been demand constrained since the surge in productivity during three decades from 1960 to 1990
- New investment in agriculture will resume the upward productivity path and re-establish the long term downward trend in real prices
- Policy makers need to make sure that when stocks get re-instated the surpluses do not cause a collapse in agriculture – especially in the developing world

Importance of Agriculture (GDP, employment & exports)



More than 70% of population in least developed countries are dependent upon agriculture

It is Agriculture that matters for Food, Feed, Fibres and Fuels

- The world needs improved agricultural productivity
 - Especially in the developing world to reduce poverty
 - More security of crop demand created by the biofuel sector will lead to greater investment to
 - Develop crops that
 - are more drought and disease resistant
 - need less Nitrogen fertiliser
 - produce more tonnes per hectare
 - Improve targeting of Nitrogen
 - Encourage nitrogen fertiliser from low energy processes

Summary 1

- **Poverty** is causing people to go hungry
- **Oil costs** are causing long term inflation for food, transport, fertilisers and a lot more
- **Climate change** is being accelerated by using fossil fuels

Summary 2

- **Poverty** - biofuels will create a more stable market for agricultural products & sustain employment for the poor - 73% of whom work in the rural economy
- **Oil** – *“50% of new non-OPEC transport fuel is now coming from biofuels”* (IEA April 2008)
- **Climate change** - biofuels can provide significant greenhouse gas savings

In conclusion

The food market has failed to support cereal production for more than a decade. The main losers have been developing countries which were unable to earn sufficient from their crops to maintain the productive capacity of their land.

Biofuels can work in partnership with agriculture across the world to provide market security, support research to improve productivity & stimulate the investment to maintain and improve the productive of the planet for all uses Food, Feed, Fibre and Fuel.

The critics of biofuels need to concentrate on solving the problems – not deriding the solutions

Thank you

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World Biofuels 2008