



Energy research Centre of the Netherlands

Current policy issues in the biofuels dossier

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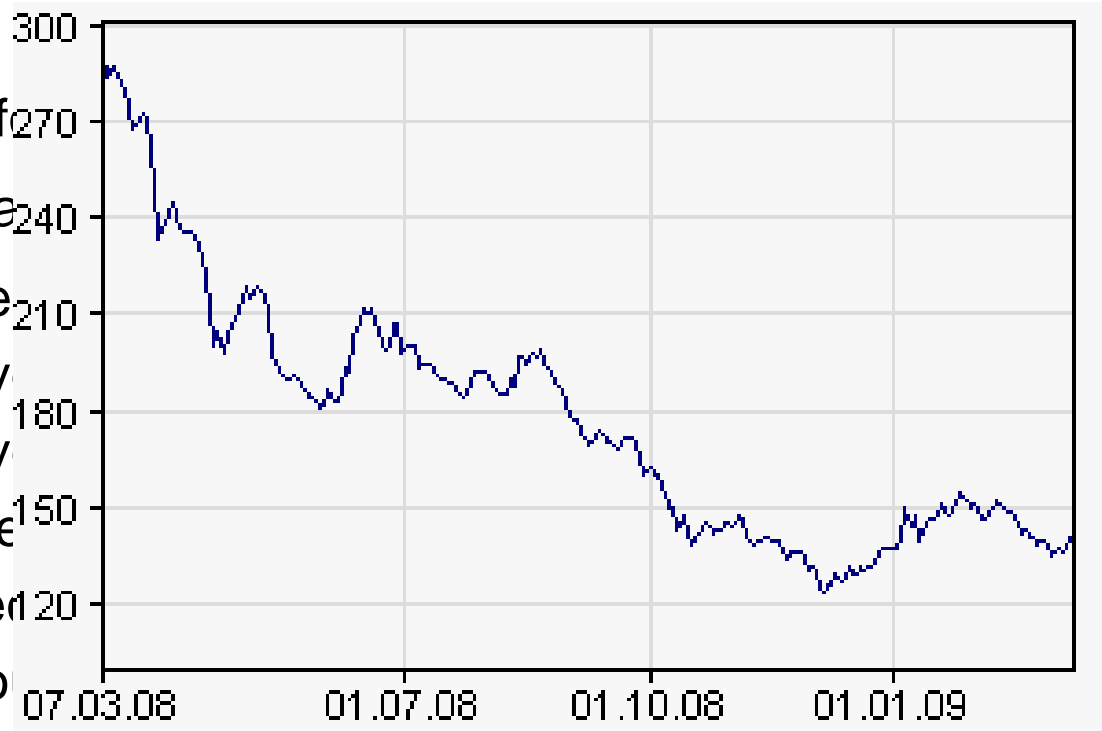
Three topics

1. Impacts on commodity markets
2. Indirect land use change
3. How to spur 2nd generation biofuels?

1. Impacts on commodity markets: did we bark up the wrong tree?

- Commodity prices dropped again, biofuels production did not

- Other causes for price drops:
 - Adverse weather
 - Energy prices
 - In developed countries
 - In developing countries
 - Interest of hedge funds
 - Market expectations
 - Exporting countries



S:

Long-term structural impacts

Source	Reg	Biof %	Price impact on		Cross P impact
			Bioethanol feedstock	Biodiesel feedstock	
EC DG agri (2007)	EU-27	10% by 2020	+ 3-6% cereal	+ 8-10% rapeseed + 15% sunflower seed	
Banse et al (2008)	EU	11% by 2010	+2% cereals +6% sugar	+8% for oilseeds	
Elobeid et al, (2006)	USA	20% by 2015	+58% maize		+ 5 soybean :+20% soy oil +20% wheat
OECD AGLINK (2006)	US, Brazil, Canada, EU	10% by 2014	+ 60% sugar + 4% cereals	2% oilseeds 20% veg oil	
Msangi et al., 2007	China+US A+EU+India+Brazil	20% by 2020	+25-40% corn +40-65% sugar cane +15-30% wheat	+ 40-75% oilseeds	
FAO, 2005 (@2030 simulation)	World	Not spec.	+2,8% maize (for every additional 10 mio t of maize used for ethanol)		+1,1 sugar, +0,2 veg oils, +0,9 wheat, +1,2 rice

Impacts differ between policies

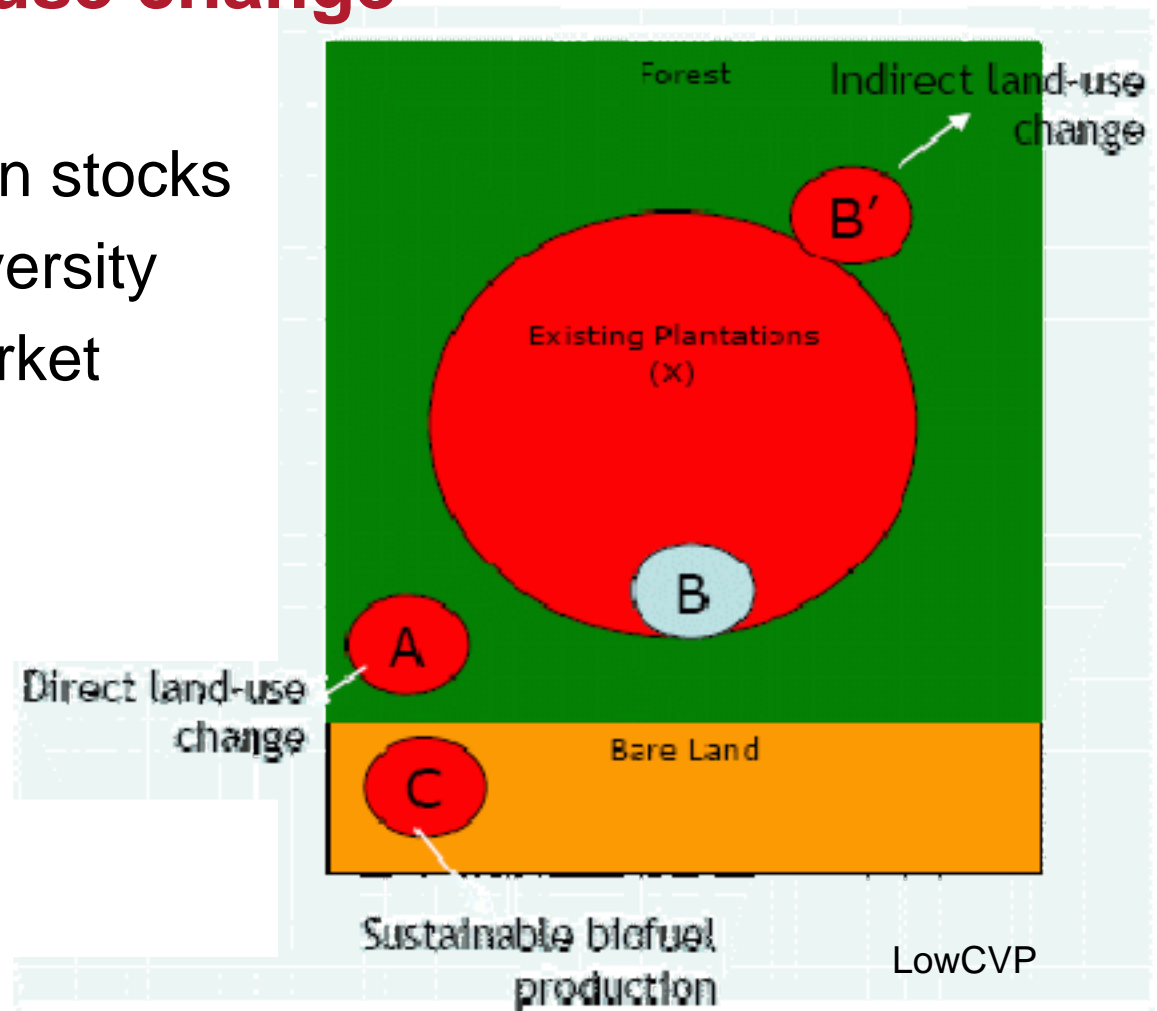
	Quota systems	Tax exemptions
Impact of feedstock prices on biofuels competitiveness	Limited	Significant
Impact of oil price on biofuels competitiveness	Limited	Significant
Impact of supply overshoot on biofuels price	Significant	Limited

2. Indirect land use change

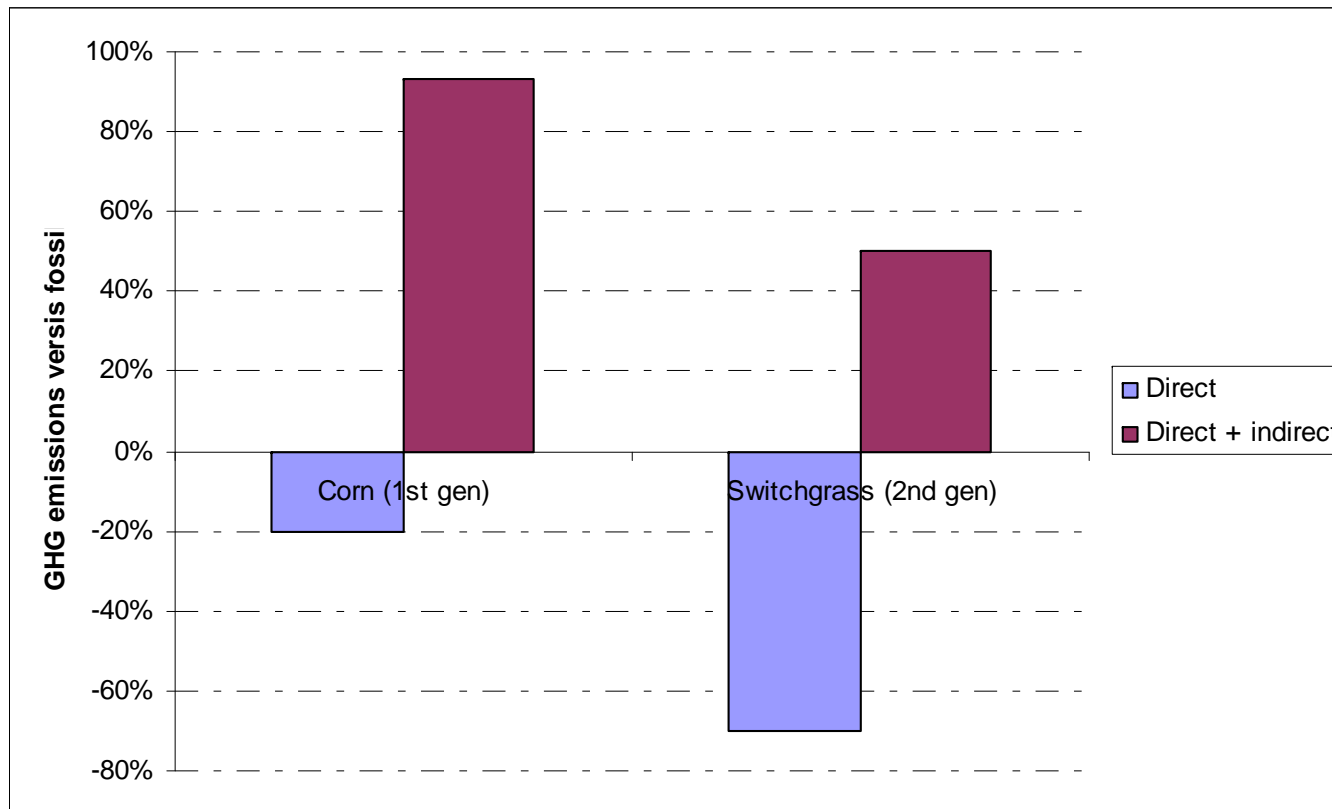
- Impacts on carbon stocks
- Impacts on biodiversity
- Also linked to market impacts



Photo: Xander van Tilburg (ECN)



Indirect effects are key...

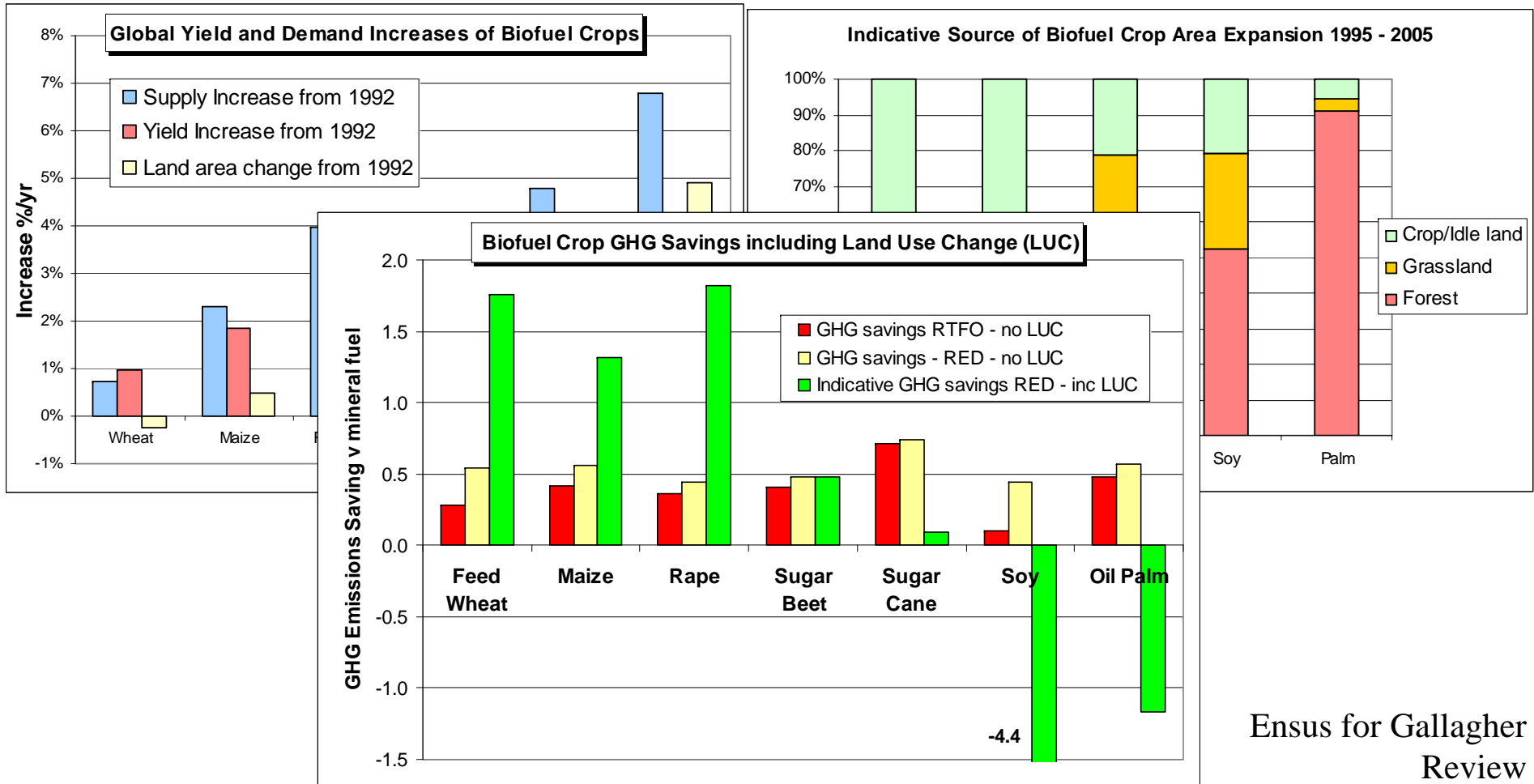


Searchinger (2008)

..but extremely complex....

- How much biomass?
- How much co-product?
- How do prices respond?
- How does agricultural productivity (per ha) respond?
- How much land use change due to the price increase?

... and difficult for certification.



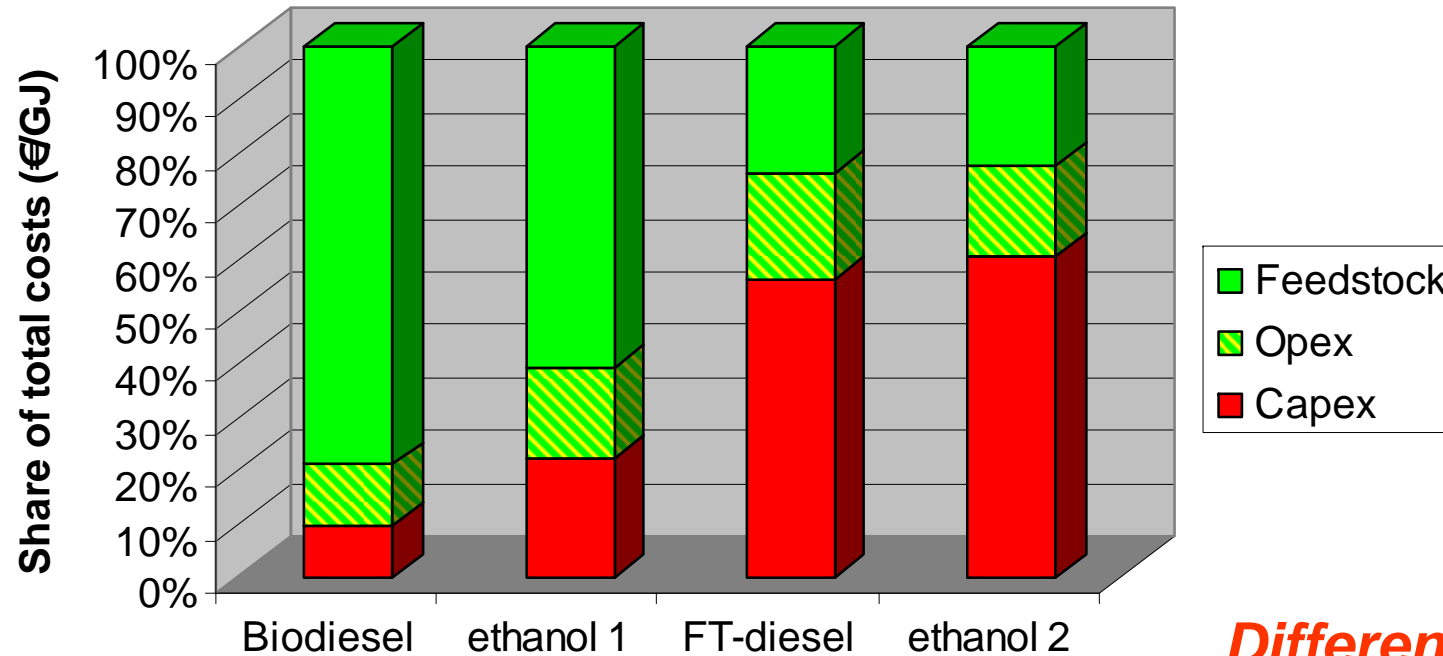
3. Incentives for 2nd generation biofuels

- Conventional policies
 - RTD support
 - Investment grants
 - Double-counting?

- Investment risks may be a key issue

Cost structures → investment risks

“Always on”: more susceptible to volatilities in biofuels prices
 less in feedstock prices



Different risk profiles

Susceptible to variations in feedstock prices

Different impacts of policy

Flexible in temporary reductions of production

Some policy recommendations

- Indirect impacts:
 - Monitoring of impacts
 - System approach for prevention
 - Improvement of agricultural productivity!
 - Certification?
- Second generation biofuels:
 - Develop risk-reducing policies
 - Don't take over the risks themselves

Thank you!

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