

Biofuels and the Poor: *Finding the Win-Wins*

Joachim von Braun

Director General

International Food Policy Research Institute

SESSION 4: BIO-FUELS AND DEVELOPING COUNTRIES

**International Conference on Biofuels, 5-6 July
2007, Brussels**

What win – wins from biofuels?

Win for the poor ?

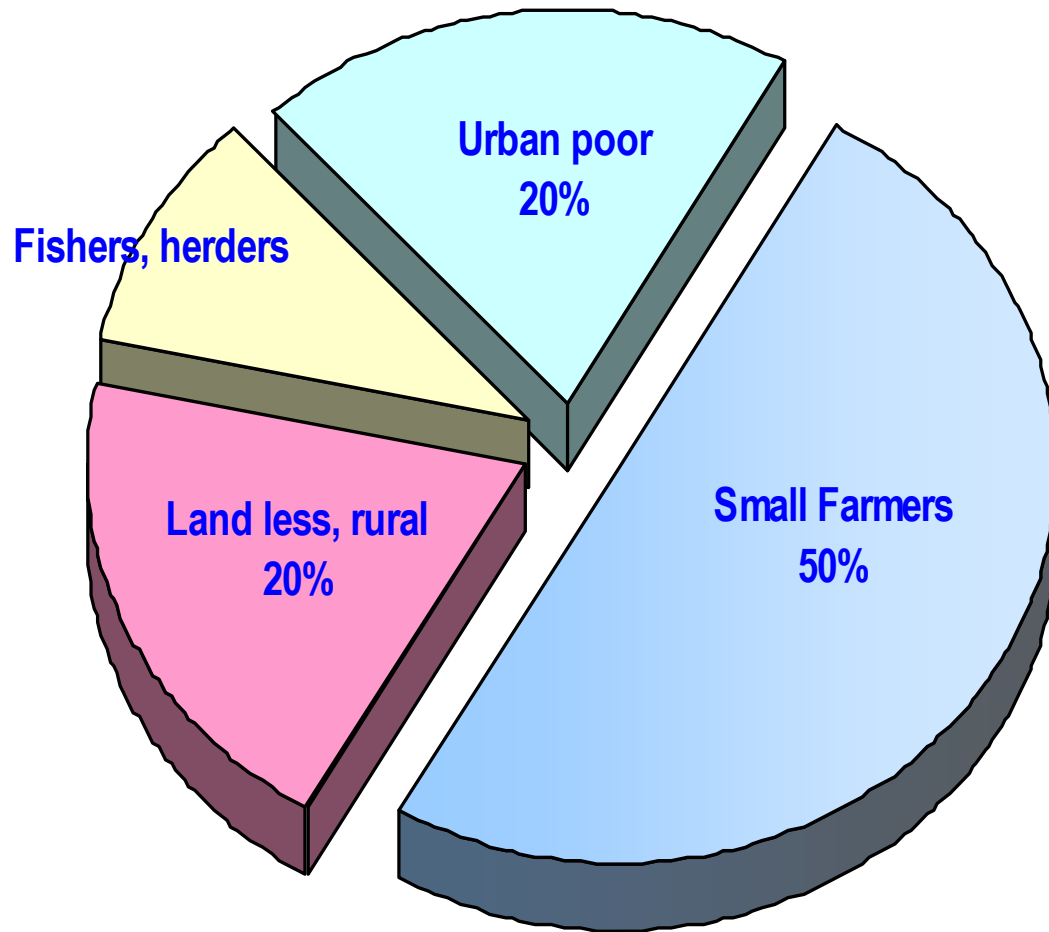
Win for farmers ?

Win for energy security ?

Win for environment / climate change ?

...or some losses and some wins?

Which of these poor affected by hunger may gain or loose from biofuels?



Source: UN Millennium Project, Hunger Task Force, 2005

Which of these farms may participate in bio-fuels production??

the world's farms by hectare

Farm Size (ha)	% of all farms	Number of farms (millions)
< 2	85	387
2 - 10	12	54
10 - 100	2.7	12
> 100	0.5	2
Total	100	456

Source: von Braun (2005)

Opportunities for poor farmers

- Higher agricultural product demand can increase incomes of poor farmers
- Energy crop harvesting and processing can create more job opportunities for the poor
- Energy crops can be grown on marginal lands where many of the poor live
- New technologies may utilize crop residues in poor areas

Challenges for the poor

- *Food vs. fuel tradeoff leading to:*
 - **Diversion of scarce natural resources (land, water)**
 - **Commodity price increase**
 - **Food price fluctuations following oil price fluctuations**

- *Poor consumers and small farmers*
 - reduced food quantity and diet quality
 - economies of scale not reached by small farmers

Three fuel versus/cum food Scenarios

Comparison of 3 scenarios to 'baseline projections'
(which have current biofuel demand embedded)

- **Conventional** - rapid global growth in biofuel production under conventional conversion technologies [3%→20% by 2020]
- **2nd Generation** - 'softening' of demand on food crops due to cellulosic technologies coming online
- **2nd Generation Plus** - adds productivity improvements [2-7%] to show how the impacts can be further mitigated

% Changes in world feedstock prices under scenarios, compared with baseline

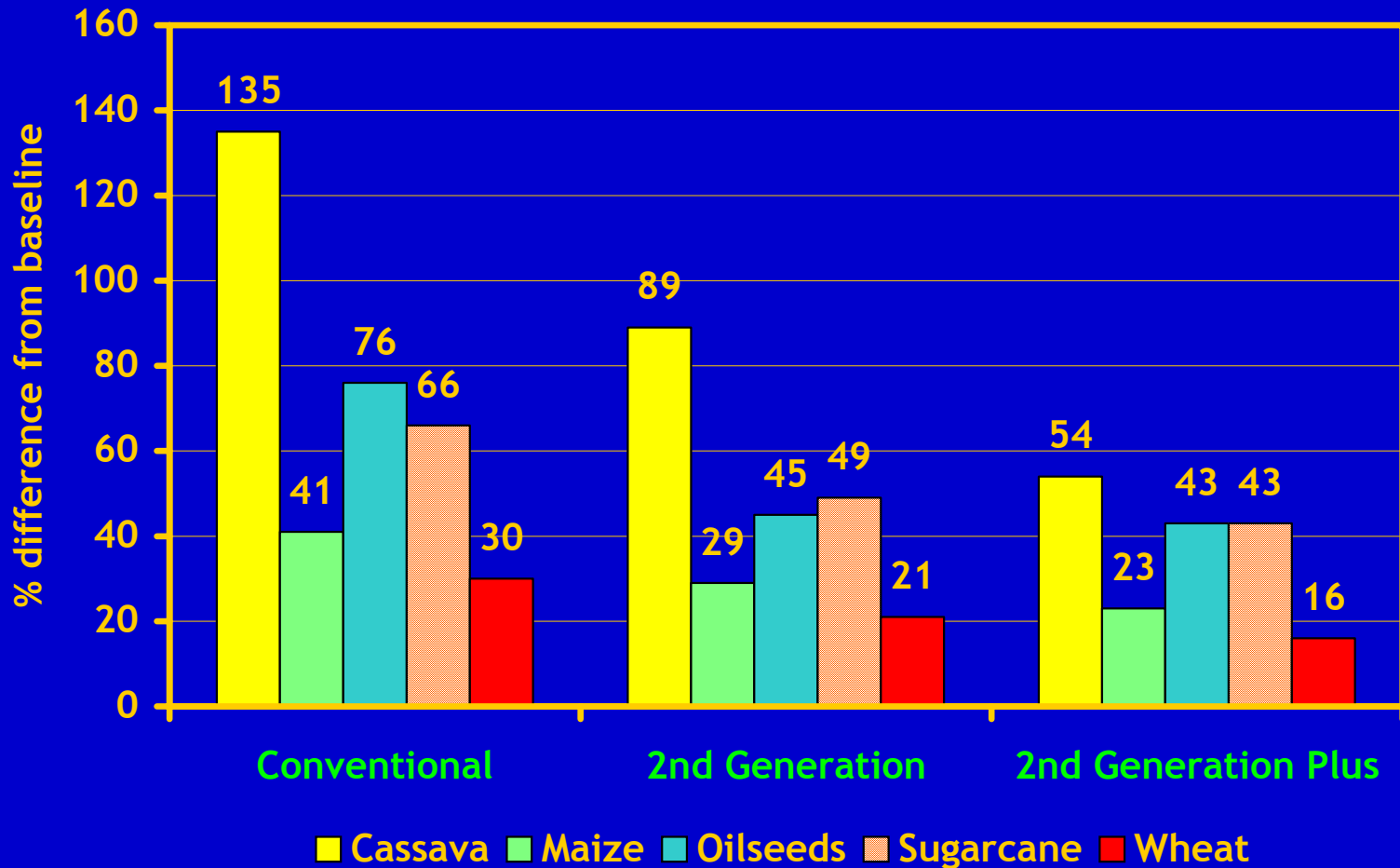
Feedstock crop	<u>Aggressive</u> biofuel growth scenario without technology improvements ^a		<u>Cellulosic</u> biofuel scenario	Aggressive biofuel growth scenario with <u>productivity</u> change as well as cellulosic conversion
	2010	2020	2020	2020
Cassava	33	135	89	54
Maize	20	41	29	23
Oilseeds	26	76	45	43
Sugar beets	7	25	14	10
Sugarcane	26	66	49	43
Wheat	11	30	21	16

^aAssumptions based on stated plans for biofuel production in Brazil, China, Europe, India, and the US, and on a scenario of aggressive biofuel growth in Africa

Source: von Braun and Pachauri, 2006

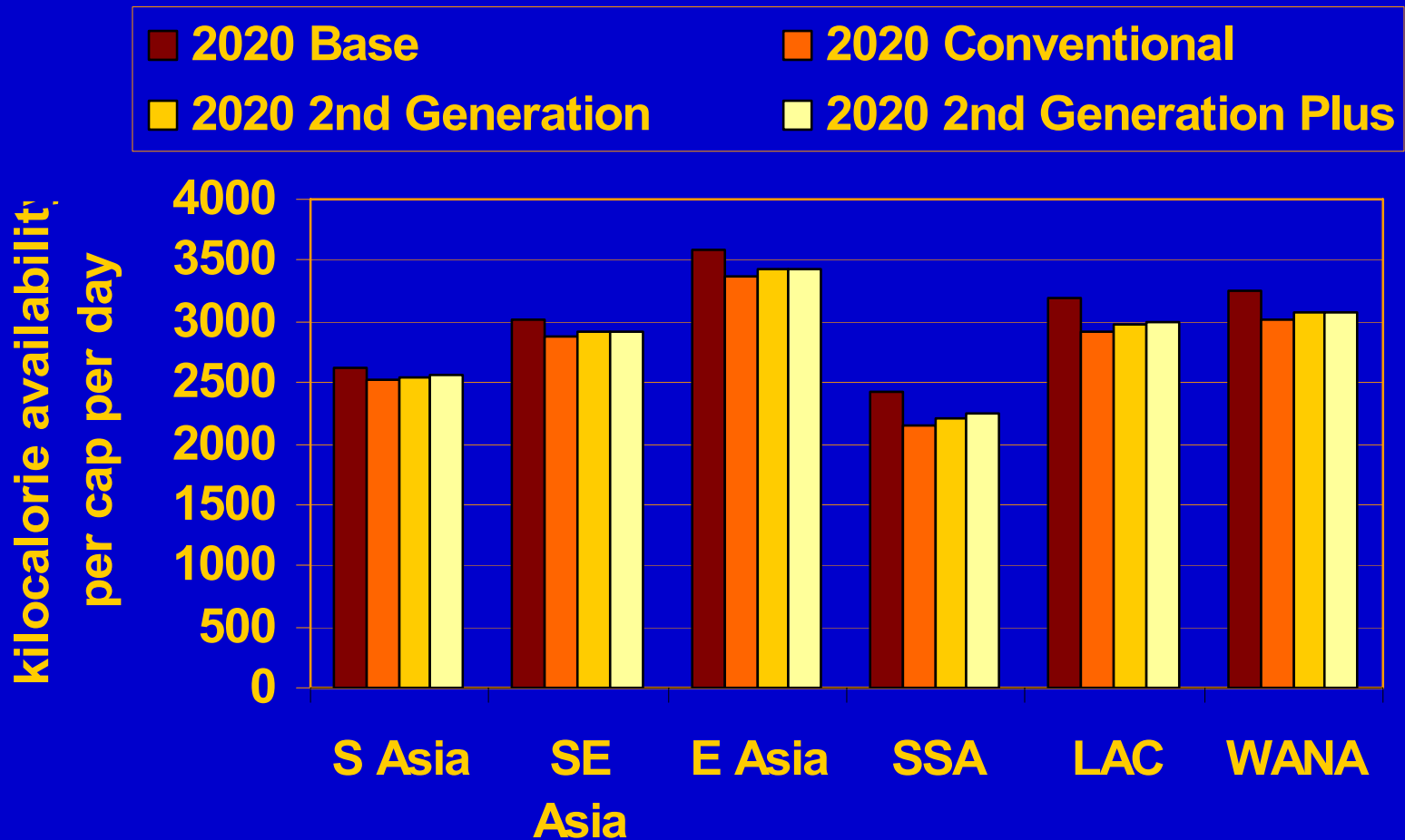
Price impacts across scenarios

Global Commodity Price Changes in 2020



Source: IFPRI, Msangi et al., 2007

Implications for Food Security: Caloric Availability Across Scenarios



Source: IFPRI, Msangi et al., 2007

How can win – wins be realized?

1. Farmers need to have:

- Access to information
- Access to markets
- Crop insurance against energy crop price fluctuations
- Incentives for soil fertility, water efficiency and biomass management

How can win – wins be realized?

2. The world's absolute poor and hungry under more uncertain and increased food price regimes need to have:

- Strengthened social protection
- Targeted income transfers

How can win – wins be realized?

3. Energy and agricultural innovation policy need to:

- address the feed stock production and conversion efficiency and ecology issues jointly with ...
- the economies of scale issues of small producers (organization, contracts, technology).
- Land and water use policy by locations' potentials

**Win – wins can be realized,
but not everywhere for everyone**