



Transatlantic Biofuels Policies: What's in it for Developing Countries?

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Photos: Corbis, Eyewire, iStock



World Fuel Ethanol Production



Source: F.O.Licht

Ethanol from cellulose will add significant volumes



NWF's priorities are to

- Confront Global Warming, as the single most urgent challenge to protecting wildlife for our children's future

and to

- Restore Wildlife, through a robust network of habitats (terrestrial and aquatic) to support healthy plants and animals.



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Clarify NWF Position:

We support a long-term growth pattern to “sustainable”

Next Generation Biofuels –
as one among many long-term strategies to reduce greenhouse gas (GHG) emissions.

We propose a specific new Farm Bill program for cellulosic ethanol.



Photos: Corbis, Eyewire, Comstock



Biofuels are promoted for many reasons:

- Energy security/independence from foreign sources
- Potential to stabilize commodity prices
- Promote rural development
- Reduction of GHG emissions, and other pollutants.



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--BIOFUELS CAN'T DO ALL THAT AT THE SAME TIME--

- THE BENEFITS ARE NOT PRODUCED AUTOMATICALLY, OR FOR ALL BIOFUELS.
- THEY MUST BE PRODUCED UNDER SOCIAL AND ENVIRONMENTAL SAFEGUARDS.
- NEED TO MODERATE EXPECTATIONS.



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Biofuels that are produced with conservation safeguards for people and wildlife may gain support:

- Reduce ratio of fossil energy input to output.
- Use less water and more renewable energy in refineries.
- Avoid deforestation and use of valuable habitat land for energy feedstocks.
- Reduce water pollution and run-off.



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**Otherwise,
controversy may
stymie industry
growth:**

The pushback is already beginning



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Fossil Energy Balance

Table 3. Fossil Energy Balances of Selected Fuel Types

Fuel (feedstock)	Fossil Energy Balance
Cellulosic ethanol	2–36
Biodiesel (palm oil)	~9
Ethanol (sugar cane)	~8
Biodiesel (waste vegetable oil)	5–6
Biodiesel (soybeans)	~3
Biodiesel (rapeseed, EU)	~2.5
Ethanol (wheat, sugar beets)	~2
Ethanol (corn)	~1.5
Diesel (crude oil)	0.8–0.9
Gasoline (crude oil)	0.8
Gasoline (tar sands)	~0.75

Note: Figures represent the amount of energy contained in the listed fuel per unit of fossil fuel input. The ratios for cellulosic biofuels are theoretical. For sources, see full report.

Source: Worldwatch Institute

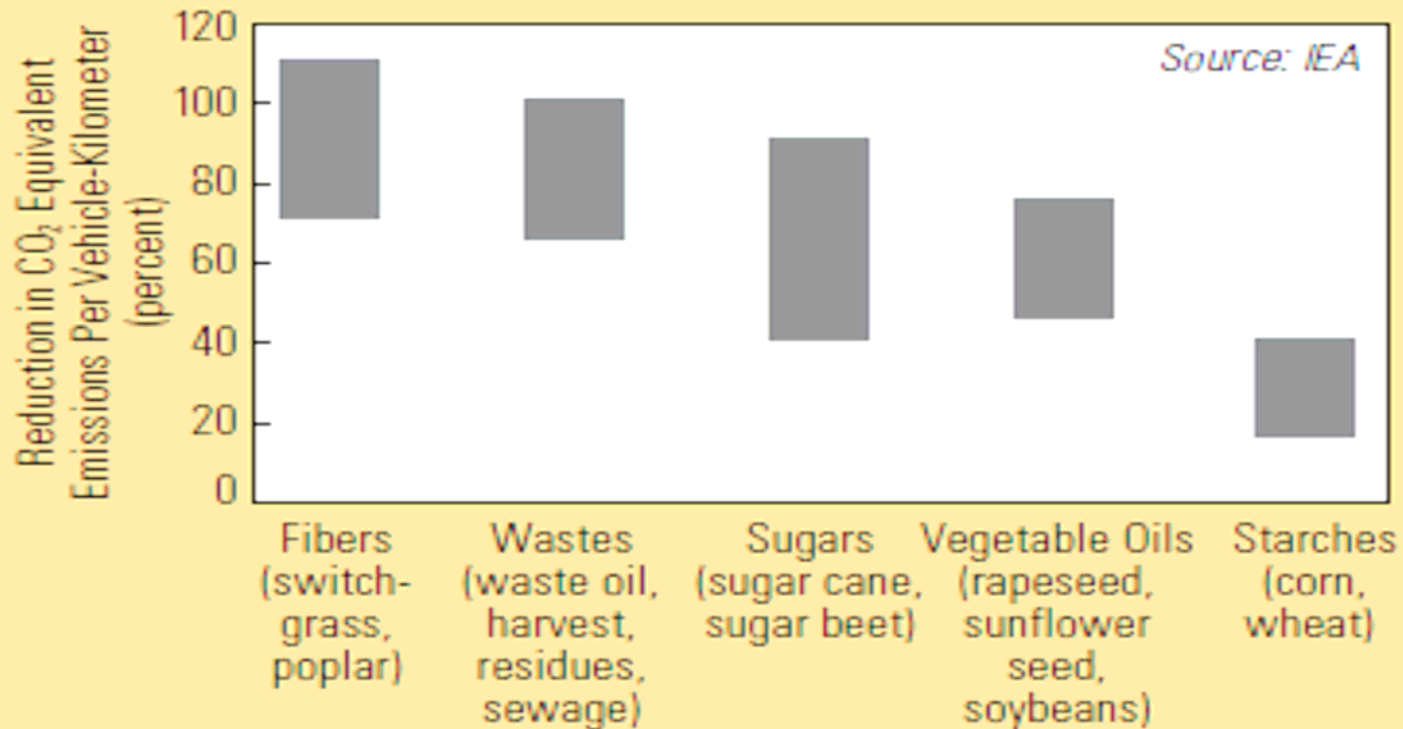


Photos: Corbis, Eyewire, iStock



Greenhouse Gas Reductions

Figure 5. Potential Reductions in GHG Emissions, by Feedstock Type



Photos: Corbis, Eyewire, iStock



Other Recent Controversies...

- Water use – from 3 to 15 gallons of water needed to refine ethanol – not counting irrigation.
- High productivity feedstock for Biodiesel – oil palm – leading to deforestation in SE Asia, Africa?
- Impacts of “Corn surge” in US – projected increase from 76 to 93 million acres over the next decade?
- 2006: 20% of corn crop fed only 2% of US gasoline demand.
- Major shift in agriculture map translates into small shift in energy map.



Photos courtesy of Lynne K. Brown



International Conference in Bonn: “Sustainability Criteria for Bioenergy” October, 2006

Results:

- Compilation of concerns about the potentially serious negative impacts.
- Awareness that these concerns may produce conflicts and impede growth of the Bioenergy (including biofuels) industries.
- Chair’s Final Statement recommended next steps.



Photo credits: Lynette K. Brown



Provocative conclusion from several experts' studies:

- If land that currently stores significant amounts of carbon (such as forests, native prairies, peat lands) is plowed up to produce **row crops** for 1st generation biofuels, the GHG impacts are **negative, not positive.**
- Even if such land is plowed up to plant **perennial** energy crops, such as palm oil trees, the GHG balance can still be **negative from 50 to 100 years.**



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Key Recommendations from Bonn Conference final document:

- “Sustainability” safeguards are essential
 - To protect people and environment
 - To reduce controversies over negative environmental and social impacts.
- Certification system is needed
 - To translate sustainability safeguards into performance measures
 - To involve stakeholders and ensure credibility
 - Can be legislative or voluntary.



Photo: Corbis, Eyewire, iStock



Roundtable on Sustainable Biofuels

- **Recently launched** private sector initiative.
- **Multi-stakeholder process**, including industry, environmental and social advocates, producer groups including from developing countries, academic experts and inter-governmental bodies.
- **Based in Switzerland** at a technical university.
- **Goal:** to build on existing internationally agreed standards and assurance schemes, to create a practical and credible evaluation process for use by purchasers, banks, NGOs, governments, etc.
- **Process** will be transparent and balanced among stakeholders.



Other Initiatives

- **The Netherlands:** developing a set of sustainability standards.
- **United Kingdom:** Low Carbon Vehicle Partnership draft environmental standards.
- **The European Parliament's** industry committee has called for an EU-wide ban on the use of biofuels derived from palm oil.
- **California:** new Low Carbon Fuels Standard presumes need for sustainability safeguards.
- **Sustainable Biodiesel Alliance:** proposing standards for locally produced biodiesel.
- **Brazil:** biodiesel program offers financial incentives for small scale farmers.





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