Organic agriculture as an opportunity for sustainable agricultural development

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McGill Conference on Global Food Security
October 17, 2012
Today

One in six people in developing countries are undernourished.

30% of anthropogenic GHG emissions are from agriculture.

70% of water withdrawals are for agriculture.
Tomorrow

By 2050 meat consumption will double

By 2050 agriculture will need to feed 9 billion people
Global sustainable food security

more food

at affordable prices

ensuring livelihoods to farmers

& reducing the environmental cost of agriculture
Organic agriculture in numbers

- 0.9% of global agricultural land
- 1/3 of land is in developing countries
- >¾ of producers are in developing countries
- 2010: global market was 59 billion $ -> growing ca. 300% since 2000
- 96% of organic sales made in Eu & North America
Relative Organic Yield Performance

OVERALL = Overall results // COMPARABLE = Organic & conventional farms with similar non-food rotations & N input // BMP = Best Management Practices applied to both systems // BOP = Best Organic Performance including legumes & perennials under rain-fed conditions and favourable soils.

CREDIT: McGill University / University of Minnesota’s Institute on the Environment

-> Yield performance depends on context

Seufert et al. (2012)
Study limitations

Most studies:
- developed countries
- commercial conventional systems

Seufert et al. (2012)
<table>
<thead>
<tr>
<th>Problems</th>
<th>Benefits</th>
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<tbody>
<tr>
<td>increased costs (?)</td>
<td>reduced costs (?)</td>
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<td>reduced yields (?)</td>
<td>increased yields (?)</td>
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<td>increased dependence</td>
<td>increased prices</td>
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<td>increased labour</td>
<td>increased resilience</td>
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<td></td>
<td>increased benefits</td>
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<tr>
<td>+ labour</td>
<td>increased employment</td>
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<tr>
<td>+ certification</td>
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<td>+ dependence on certifying &amp;</td>
<td>- inputs</td>
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<tr>
<td>exporting companies</td>
<td>+ organization &amp; access to</td>
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<td>health &amp; credit services</td>
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Constraints to the adoption of organic agriculture

- Labour
- Availability of organic inputs
- Knowledge -> software based innovation
- Limited domestic demand
- Access to international markets
- Certification
Policy recommendations:
1. Concentrate policies on countries and regions where organic agriculture has the most potential.
2. Contribute to capacity building of organic farmer cooperatives.
3. Help in developing domestic organic markets.
4. Promote the development and integration of organic markets.
5. Support the development of participatory guarantee systems (PGS).
6. Support research on organic agriculture in developing countries.

Constraints:
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Thank you!

Questions?

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Impact of organic agriculture

Area

Yields (overall)

Consistent
Impact of organic agriculture
Impact of organic agriculture

<table>
<thead>
<tr>
<th>Area</th>
<th>Food nutrient contents</th>
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