The future of farming

Profitable and Sustainable Farming with Conservation Agriculture

Zollikofen/Bern, Switzerland
June 21st – 24th, 2021
Mainstreaming of CA with national policy and institutional support and for global governance to support national and international needs and commitments.

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Outline

1. Review of past policies that have influenced, increased adoption of CA.
2. Private policy influence, certifications, influencers.
3. International conventions.
4. Current trends (and Covid?)
5. Summary
## CA Traits

<table>
<thead>
<tr>
<th>Costs</th>
<th>Benefits</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less energy use</td>
<td>Erosion eliminated</td>
<td>Less yield variance</td>
</tr>
<tr>
<td>Less labour peaks</td>
<td>Increase OM, nutrient cycling</td>
<td>Less stress</td>
</tr>
<tr>
<td>Less inputs</td>
<td>Ecosystems, Biodiversity</td>
<td>Increased profits</td>
</tr>
<tr>
<td>Less capital</td>
<td>Pathology, pests</td>
<td>Markets?</td>
</tr>
<tr>
<td>More/less pesticides</td>
<td></td>
<td>Sustainability</td>
</tr>
<tr>
<td>Knowledge, support</td>
<td></td>
<td>Integrated systems</td>
</tr>
</tbody>
</table>
Literature review of adoption - disadoption

1. Mindset; knowledge; understanding
2. Capacity of institutions (farmer organizations, extension agencies, research institutes)
3. Access to appropriate equipment, inputs, output markets and financing.
4. Land tenure. CA is a long-term business venture.
Table 1. Policies used by global region as mentioned in regional reports.

<table>
<thead>
<tr>
<th>Policies Used</th>
<th>Locations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LAC</td>
</tr>
<tr>
<td>Equipment subsidy</td>
<td>Argentina</td>
</tr>
<tr>
<td>Tax stimulus</td>
<td>Argentina</td>
</tr>
<tr>
<td>Cooperative research</td>
<td>Argentina, CGIAR stns</td>
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<tr>
<td>Workshops, think- tanks</td>
<td></td>
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<tr>
<td>Multinational policy</td>
<td>EU</td>
</tr>
<tr>
<td>National Gov support</td>
<td>Brazil, Paraguay</td>
</tr>
<tr>
<td>Local Gov support</td>
<td>Brazil</td>
</tr>
<tr>
<td>Foreign aid agencies</td>
<td>Paraguay</td>
</tr>
<tr>
<td>Specific CA agencies</td>
<td></td>
</tr>
<tr>
<td>Cross compliance</td>
<td></td>
</tr>
<tr>
<td>Farmer groups</td>
<td>Paraguay</td>
</tr>
</tbody>
</table>

(FAO, 2017)
Local successes

Machinery – unavailable, inappropriate, expensive.
Service providers - operator, knowledge, risk, inputs, timing
  • Bangladesh, India
  • Kenya, Tanzania, Zimbabwe
  • Argentina, USA

CA knowledge – learning, sharing, capacity building
Farmer organizations – outreach, local, advisory
  • Zimbabwe, Zambia Farmers Union, KwaZulu Natal
  • S. America, N. America
The clean innovation system and how government and other actors influence it.

(Push policies drive new ideas)

(Pull policies stimulate markets)

(Grow policies grow ideas into marketable products)

(Strengthen policies make the system more effective and resilient)

(Elgie & Brownlee, 2017)
Private policy influence, certifications, influencers.
<table>
<thead>
<tr>
<th>Public Policy</th>
<th>Private Policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Long development process</td>
<td>• Short development process</td>
</tr>
<tr>
<td>• Structured public consultation</td>
<td>• Informal consultation (unseen, private) as well as public</td>
</tr>
<tr>
<td>• All interests encompassed</td>
<td>• Can be targeted/specific interests</td>
</tr>
<tr>
<td>• Cautious, conservative</td>
<td>• Radical, risky, experimental, pushing the envelope</td>
</tr>
<tr>
<td>• Forcing collaboration</td>
<td>• Collaborative willingness (pre-competitive)</td>
</tr>
<tr>
<td>• Public client</td>
<td>• Public client</td>
</tr>
<tr>
<td>• Long approval process</td>
<td>• Short approval process</td>
</tr>
<tr>
<td>• Large governance</td>
<td>• Small (CEO or group) governance</td>
</tr>
<tr>
<td>• Handles slowly</td>
<td>• Handles flash points quickly</td>
</tr>
<tr>
<td>• Plentiful resources</td>
<td>• More limited resources</td>
</tr>
</tbody>
</table>

(Goddard et.al., 2020)
### Round Tables

<table>
<thead>
<tr>
<th>Year</th>
<th>Event/Initiative</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>Palm oil (RSPO)</td>
</tr>
<tr>
<td>2004</td>
<td>Wilmar</td>
</tr>
<tr>
<td>2006</td>
<td>Soy (RTRS)</td>
</tr>
<tr>
<td>2007</td>
<td>Cocoa (RSCE)</td>
</tr>
<tr>
<td>2010</td>
<td>Tetley, SaraLee's sustainability initiatives</td>
</tr>
<tr>
<td>2011</td>
<td>Beef Round Tables</td>
</tr>
</tbody>
</table>

**Wildlife**

**Environmental**

**Business and Biodiversity Offset Program, BBOP**

**World Economic Forum (2020)**

**World Business Council for Sustainable Development, wbcasd**

(Transparency, Laws, Labour, Environment, Practises)
Public – Private Benefits Framework.  

(Pannell, 2008)

Environmentalists

CA

Green revolution
International Conventions
Climate Change - IPCC

• All countries engaged
• High frequency meetings
• Assessment science
• Climate Smart Agriculture = CA +/-
• Paris Accord – C - 4/1000, Rulebook, urgency
• Slow process
• Remaining multilateral forum
International conventions and initiatives

- Convention for Biological Diversity, CBD
  - New 10 year strategy next year
  - Need to progress beyond protected areas. Need agriculture.
  - ‘Other effective area-based conservation measures’, OECMs
- UN Convention to Combat Desertification, UNCCD
- UNEP - influencer
- Circular Economy
‘The Biggie’ - SDGs

- 2030 target
- UN
- Business support
- CA aligned
- Complex
- 17 goals
- 169 Targets
- 230 Indicators

https://sdgs.un.org/goals
Conventional Issues

- Issue focused – tunnel vision, biases
- Broadly focused – can’t get past broad statements
- National support or compliance?
- Restrictive or enabling?
- Slow and methodical, inclusive
- Agriculture on the radar? Knowledge, understanding?

- Signals – issues, directions, need, pointing
- Public watches and learns
Current trends (and Covid?)
Macro Drivers

- Increasing global temperatures
- Increasing global population
- Increasingly urbanized population
- Economic growth driven by developing economies
- Increasing demand for energy
- Increasing connectivity of people (digital and physical)
- Transition from unipolar to polynodal world
COVID-19: The Ultimate Disruptor

- COVID-19 did not stop macro drivers, but did change how we look at them
- Climate change could increase the risk of pandemics
- Increased population in close proximity to one another could facilitate disease spread
- Economic impact (negative and positive) is unevenly distributed
- Energy demand shifted, declined and is beginning to rebound
- Increased technological connectivity is a necessity, physical connectivity can be a risk
- The weakness of multilateral governance is showing, regional power is of increasing importance
Attend the 8\textsuperscript{th} World Congress for the rest of the story!
Summary

• CA policy development by accident or as needed?
  • mindset, capacity, access, tenure.
  • Systems and long term thinking and experimentation
  • Push, pull, strengthen, grow policies? Actors?
• CA has private as well as public benefits
• Private policies can be focused and drive hard
• Conventions create expectations. Opportunities?
• Trends of populations, governance, influence
• Covid-19 disruptions (forever?). Lessons.