Why and how can CORE Organic continue to be a great success?

presentation in Bonn 10 Dec, 2019

by

Erik Steen Kristensen
Co-ordinator of Core Organic I (2004-2007)
Present employed in The Agricultural Agency, Ministry of Environment and Food, Denmark
Outline:

1. Original purpose, ideas and plans for CORE Organic I
2. What results have been obtained during the last 15 years?
   - Development in partners and transnational calls.
   - Development in Organic Eprints
3. The future - How can OFF continue to be a strategic research case for sustainable agri-food systems?
   - Contribution to public goods and sustainable development goals
   - Further development in open access to research results along the OFF chain
4. Conclusion
CORE Organic I: (Coordination of European Transnational Research in Organic Food and Farming)

Coop. of 11 Countries
Start: 1st October 2004
Duration: 36 month
Budget: 1.200.000 €
Financial input to OF&F-research - Original plan made in 2006

Mill. € year\(^{-1}\)

- **From EU-Commission**
- **Total national input in to OF-research in 11 countries**
- **Transnational pool**
- **Plan for CORE Organic**
Objectives of CORE Organic I

The overall objective of CORE Organic is to enhance quality, relevance and utilization of resources in research in organic food and farming and to establish a joint pool of at least 3 million € per year for Transnational research in organic food and farming by the end of the project. By gathering a critical mass and establishing a coordinating centre the specific objectives are:

1. Increase exchange of information and establishment of a common open web based archive
2. Coordination of existing research and integration of knowledge
3. Sharing and developing best practice for evaluating organic research
4. Identification and coordination of future research
Development during last 15 years in partners and transnational calls

1-CO I (2004-10, FP6) 1 call, 8 projects, 8.3M Euro
2-CO II (2010-14, FP7) 3 calls, 14 projects, 14.9M Euro
3-CO Plus (2013-18, FP7) 1 call, 11 projects, 11M Euro,
4-CO Cofund (2016-19) 1 call, 12 projects, 14M Euro

Total figures since 2004:
7 calls - 45 projects - 48M EUR.
Use of Organic Eprints in 2019 (www.orgprints.org)

Organic Eprints contains over 23,500 eprints ~ > 34,000 documents.

Organic Eprints is the only archive based on research in Organic Agriculture in the world – and among top ten of all agricultural archives.

1,8 mio downloads the past year - > 150,000 per month.
Development in Organic Eprints during 15 years.

Development in number of uploads

Origion of Eprints/uploads

Downloads
Outline:

1. Original purpose, ideas and plans for CORE Organic I
2. What results have been obtained during the last 15 years?
   - Development in partners and transnational calls.
   - Development in Organic Eprints
3. The future - How can OFF continue to be a strategic research case for sustainable agri-food systems?
   - Contribution to public goods and sustainable development goals
   - Further development in open access to research results along the OFF chain
4. Conclusion
Public goods are:

- Goods or services that society wants its citizens to have access to, but which are normally not "tradeable", which means that the price and amount is not determined by the market, i.e, the good is
  
  - Non-excludable and non rival – everybody can enjoy or consume the good without reducing the amount available to others.
  
  - The good can be enjoyed/consumed without payment of it, but it is only free because others secure that the good is available.
Organic principles

Organic rules = minimum requirements

Organic production and processing

COMMON GOODS

- Bio-diversity
- Nature
- Environment
- Human health and welfare
- Animal health and welfare
- Enterprise
- Rural development
- Energy and climate
- Human health and welfare
- Animal health and welfare

Source: Knowledge Synthesis, ICROFS 2015
Examples of effects of the organic rules in relation to plant production

- Reduce N-leaching in dairy production
- Complicated N-management
- Risk of N-losses
- Reduced yield
- Healthy compounds?
- Human health
- Product development
- Soil fertility
- Biodiversity and pollination

Plant production: ÷ pesticides
÷ crop rotation
÷ organic manure
÷ mineral N
÷ food additives

Source: Knowledge Synthesis, ICROFS 2015
## Contribution of organic farming to public goods

<table>
<thead>
<tr>
<th></th>
<th>Mainly</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Positive</td>
</tr>
<tr>
<td>Nature and biodiversity</td>
<td>X</td>
</tr>
<tr>
<td>Environment</td>
<td>X</td>
</tr>
<tr>
<td>Energy and climate</td>
<td>X</td>
</tr>
<tr>
<td>Soil fertility</td>
<td>X</td>
</tr>
<tr>
<td>Human health and welfare</td>
<td>X</td>
</tr>
<tr>
<td>Animal health and welfare</td>
<td>X</td>
</tr>
<tr>
<td>Enterprise and rural development</td>
<td>x</td>
</tr>
</tbody>
</table>

Source: Knowledge Synthesis, ICROFS 2015
New possibilities for extracting protein from herbage

- Herbage like grass, clover, and alfalfa contains 20 – 25 percent protein.
- The yield can be double or triple of grain crops.
- Grass, clover and alfalfa can be grown with low input and low loss to the environment.
- New biorefinery technologies makes it possible to extract protein and other components.
- The extracted protein has a good quality for non ruminants and can replace soyabean meal.
- The pulp can be used for cattle feed and the supernatant for biogas.
- New agroecology approach very relevant also for conventional agriculture.
From field to feed in less than ten years

In less than 10 years researchers at AU Foulum have developed a complete production system making it possible to produce high quality protein from green biomass.
New Demonstration scale facility – Green bioref 2019

Building a demonstration scale technology platform for research and development in green biorefining

Up-scaled and optimized demo-platform

- Input capacity: 10-20 t/hr
- Flexible design
- Automated control
- Improved unit operations
  - biomass washing,
  - improved maceration,
  - double pressing,
  - filtration and recirculation,
  - efficient heat precipitation with steam,
  - separation with both decantation and membrane filtration.
Prospects of expanding open access to research results - Organic Eprints

Inputs from more EU projects
- Organic Farmknowledge
- Other H2020 projects
- Horizon Europe

Inputs along the whole food chain areas
- More focus on new subjects
  - Processors
  - Traders
  - Consumers
  - Environmental/carbon footprints

New "business" areas
- Open data

New "customers"
- Input from the rest of the world
- More users
Conclusion

1. Core Organic is a great success because it has been able to continue for more than 15 years and expand in no of partners and countries.

2. Core Organic is a great success because Organic Eprints is very active and are used all over the world.

3. There is great potential for continuing the collaboration in Core Organic. Growth in transnational research collaboration. 
   –Focus on how to make more public goods from OFF in particular on reducing green house gas emissions from OFF.
   -Focus on Agroecology?
   -Use the multi-actor approach along the whole food chain.

4. There is a great potential for more access to research by expanding Organic Eprints to new users both within and outside the research community.