The Maikaal bioRe Cotton Research Project

Growing Organic Cotton under Groundwater Stress: Lessons from the Maikaal bioRe Project, Madhya Pradesh, India

Project Partners:

Maikaal bioRe, India

FiBL, Switzerland

Intern. Water Management Institute (IWM), India

Mandated by:

Swiss Agency for Development and Cooperation (SDC)

Remei AG, Switzerland

World Wide Fund for Nature (WWF)

Archived at http://orgprints.org/00002767/
Set-up of the Research Project

System comparison:
With which system is a farmer better off?

Dissemination Analysis:
What are the obstacles and success factors in conversion and dissemination?

Facilitating Extension:
How can the production system and the extension be improved?
Why to study Maikaal bioRe?

- Long experience: Started 1992 as a private sector initiative of P. Hohmann (Remei, Switzerland) and M. Jalan (Maikaal, India)
- Large size: involving 1‘100 small and medium farmers in 75 villages; 7‘500 acres certified organic cotton
- Extension component: Maikaal bioRe team provides training and advice to the farmers
- Credibility: Sophisticated Internal Control System (ICS); external inspection by bio.inspecta (CH)
Maikaal bioRe - assisting the farmers through:

- Organizing the farmers; quality management
- Providing advice and information
- Supplying organic inputs
- Buying organic cotton at 15 – 20 % higher price
- Organizing the certification and ICS
- Identifying organic markets for the food crops
- Farmers are in the process of becoming stakeholders in the company
- In 2004: Construction of a Training Centre of the bioRe Association
The Nimar Region

Regions:
- Narmada belt
- Upland

Soils:
- Vertisols
- Inceptisols
- Entisols

Location:
- 100 km South of Indore
- Narmada Valley

The Nimar Region is located 100 km south of Indore, within the Narmada Valley. It is divided into two regions: Narmada belt and Upland. The soils in this region include Vertisols, Inceptisols, and Entisols.
People in the Nimar Region
The Relevance of Soils

- Entisol
- Inceptisol
- Vertisol
Agronomic Data Monitoring

- Analysis of inputs (cash, material, labour), outputs (yields, income) and soil properties
- 120 farms, 10 villages, random selection
- Initial interviews, record keeping
- Multiple regression analysis considering soil and water parameters
To compare adopting and non-adopting households based on interviews

Considering qualitative statements, observations, perceptions etc.

Survey of approx. 400 farm families, various focus groups

Combine with the findings of the agronomic data monitoring

➤ A holistic view

To profile and characterize the adopters and non-adopters to organic farming and drip irrigation

A holistic view
Development and Extension

- Improving the production technologies (Field trials and Participatory Technology Development)
- Developing dissemination strategies
- Elaborating manuals and training tool kits
- Guidelines for efficient smallholder certification
- Exchange of experience among farmers
Organic Cotton Field Trials 2003/04 at Maikaal bioRe

<table>
<thead>
<tr>
<th>Variety trials</th>
</tr>
</thead>
<tbody>
<tr>
<td>H8 (norm)</td>
</tr>
<tr>
<td>JK4</td>
</tr>
<tr>
<td>H10</td>
</tr>
<tr>
<td>Jawahar Tapti</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Manure trials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vermi-compost</td>
</tr>
<tr>
<td>Vermi-wash</td>
</tr>
<tr>
<td>NADEP compost</td>
</tr>
<tr>
<td>Cow urine-slurry</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Green manure trials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nagpur mixture</td>
</tr>
<tr>
<td>Sesbania</td>
</tr>
<tr>
<td>Moong intercrop</td>
</tr>
</tbody>
</table>
Extension Tool Kit for Organic Cotton

- Guidelines for Organic Cotton Production
- Training Manual on Organic Cotton
- Training Manual on Soil Issues in Cotton
- Video for Group Discussions
- Training and Extension Approach
- Concept for farmer-to-farmer exchange
Stakeholder Meetings

- Sharing experience
- Getting feedback
- Joint initiatives

Final Workshop in 2005
The Relevance of the Rotation Crops

- Wheat, soya, moong, gram, sorghum, maize, chilli, sugar cane, fruits
- Production systems?
- Yields? Economy?
- Organic Markets?