6(e). Response farming- a type of farm planning being practiced in Australia considering seasonal climate forecast

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What is Response Farming

• Framing flexible adaptation strategies for the forthcoming rainy season
• It is methodology that identifies and quantifies seasonal rainfall related risks (Stewart, 191) and guides to develop strategies for addressing them at farm level
• This approach couples seasonal rainfall forecast with appropriate agronomic responses/tactics concerning crop planning
It is a flexible system of farming in which key farm decisions affecting crop water utilization is taken in response to pre season and early season rainfall predictions.

It focuses on water and its management at farm level for sustaining crop production by reducing climate related risks.
Hypothesis for Response Farming

Solutions to farming problems may be found for improved forecast of expected seasonal rainfall behavior in the cropping season.
Aim of Response Farming

• To exploit high rainfall seasons potential and minimize the risk of crop failures in poor rainfall season using rules based on date of onset and early season cumulative rainfall
Which forecast is suitable for Response Farming

• Long range weather forecast and Seasonal climate forecast, since they have enough lead time to take farm decision on land use pattern, crop planning, technology selection and tailoring
Where Response Farming is Useful

- Arid and Semi arid climate regions
- Regions with frequent climate variability
- Where adaptations strategies developed already at village level
Additional tool required in Addition to SCF/LRF

- Document on onset date
- Document on conditional probability of rainfall
- Document on initial probability of seasonal rainfall
- Document on rainfall return period
- Document on length of growing period
- Farm size information
- Land use pattern used in the past
Case Study in India (Coimbatore)

- Normal crop: rice during Oct-Nov with ground water support in addition to rainfall
- Normal seasonal rainfall: 420mm
- Seasonal climate forecast (SCF) predicted rainfall: 250 mm
- Farmers response to SCF:
  80 per cent farmers went for rice and 20 per cent farmers went for black gram with season
## Economics of the Case Study

<table>
<thead>
<tr>
<th>Details</th>
<th>Farmer with black gram</th>
<th>Farmer with rice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of cultivation</td>
<td>5000.00</td>
<td>12000.00</td>
</tr>
<tr>
<td>(Rs./4000m²)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Revenue (Rs./4000m²)</td>
<td>7500.00</td>
<td>Nil (crop failure)</td>
</tr>
<tr>
<td>Gain (Rs./4000m²)</td>
<td>7500 + 12000 = 19500</td>
<td>Nil</td>
</tr>
<tr>
<td></td>
<td>- 5000 = 14500</td>
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