2012

Feeding India One Microgarden at a Time

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Recommended Citation
Beisswanger, Kelly; Cameron, Scott; Poss, Kaitlin; and Ziegler, Kathryn, "Feeding India One Microgarden at a Time" (2012). Great Problems Seminar Posters. Book 121.
http://digitalcommons.wpi.edu/gps-posters/121
Feeding India
One Micro-Garden At A Time

Problem
- 212 million malnourished
- GHI ranked 66th out of 84 developing countries
- > 50% of children underweight
- 37.2% live below the poverty line
- > 60% rural population dependent on insufficient agriculture

Solution
Join with Heifer International to bring simplified hydroponic micro-gardens to Bihar.

Implement
- Send a team to the Charighari village of Bihar, India
- Supply the initial seeds and nutrient solution
- Provide funding for construction of micro-gardens

Educate
- Instruct families on how to build the beds
- Teach maintenance techniques to local community
- Identify cash and sustenance crops
- Inform about micro-finance

Assess
- Send research team at six month and two year intervals
- Review plot conditions
- Gather data on health and economic situations

Cost/Unit
<table>
<thead>
<tr>
<th>Aspect</th>
<th>Cost (USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial Supplies</td>
<td>$100</td>
</tr>
<tr>
<td>Construction (full plot, 20m²)</td>
<td>$255</td>
</tr>
<tr>
<td>Supplies per Year</td>
<td>$60</td>
</tr>
<tr>
<td>Maintenance</td>
<td>$40</td>
</tr>
<tr>
<td>First Year Cost</td>
<td>$355</td>
</tr>
<tr>
<td>Net Annual Profit</td>
<td>$100</td>
</tr>
</tbody>
</table>

Benefits
- More locally grown food (up to 2 kilos per day)
- Increased incomes
- Uses ¼ the land of standard farming practices
- Less water consumption
- Ability to grow exotic cash crops
- No soil necessary

Grower Layout
- growing substrate
- watertight lining
- bed structure

Hydroponics, Simplified
- Nutrient solution allows for soilless culture
- Watertight liner seals in nutrients and water for complete utilization
- No electricity, expensive materials, or extensive background knowledge required

Most Lucrative Crops

Cost/Unit

Bibliography
Beisswanger, Kelly, Scott Cameron, Kaitlin Poss, Kathryn Ziegler
Advisors: Professors Traver and Wobbe
Feed The World
B Term 2012