Accelerating Agriculture Growth: 
Moving from farming to Value chains

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presentation at the conference on
India’s Economy: Performance and Challenges

India Habitat Centre
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Outline

- Why Agriculture is important, and what can the Elephant (India) learn from the Dragon (China)?

- Indian agriculture: Under crisis or under-performance?

- To accelerate growth in agriculture, we need to move from farming approach to value chains, and reform the three “I”s…Investments (subsidies), Incentives, and Institutions.
Why Agriculture?

- “GDP growth originating in agriculture is at least twice as effective in reducing poverty as GDP growth originating outside agriculture” (WDR, 2008).

- The figures for China and Latin America are reported to be 3.5 times and 2.7 times, respectively (World Bank 2007a: 6).

- An average Indian still spends roughly half of its expenditure on food (NSSO, 2004-05)
What does China story tell us?
Start with Agriculture…else the trickle down will work very slowly
Agriculture Performance: in crisis or under-performance? (avg. growth rate in agl.3%pa)

Source: Calculations are based on data published in National Accounts Statistics, CSO, GoI, various issues
But there are bright spots! Gujarat registering highest rate of growth in agriculture since 2000-01!

Average Annual Growth Rates of Gross State Domestic Product (GSDP) and Gross State Domestic Product from Agriculture (GSDPA): Major States and All India (%): 2000/01 to 2007/08

Source: Government of India, Central Statistical Organization (as of Feb 2009).
*Average annual growth rate is from 2000/01 to 2006/07, the latest year for which data is available.
Occasionally, Indian agriculture has risen to challenges...

- **Surge I:** Green revolution in late 1960s and 1970s (driven by Govt in close collaboration with international centers);

- **Surge II:** White Revolution in 1970s and 1980s (driven by linking cooperatives to demand centres, heavily supported by Govt investments);

- **Surge III:** Blast of Bt Cotton and Hybrid Maize (2002 onwards) (driven largely by the private sector)
Surge III: A Blast of Bt Cotton ~pioneered by the corporate sector

<table>
<thead>
<tr>
<th>Year</th>
<th>Area (million ha)</th>
<th>Prod (million bales)</th>
<th>Yield (kg/ha)</th>
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</thead>
<tbody>
<tr>
<td>1998-99</td>
<td>15</td>
<td>20</td>
<td>10</td>
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<tr>
<td>1999-00</td>
<td>16</td>
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<td>2000-01</td>
<td>17</td>
<td>22</td>
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<td>2001-02</td>
<td>18</td>
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<td>2002-03</td>
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<td>2003-04</td>
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<td>25</td>
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<td>2004-05</td>
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<td>2005-06</td>
<td>22</td>
<td>27</td>
<td>17</td>
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<td>2006-07</td>
<td>23</td>
<td>28</td>
<td>18</td>
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<tr>
<td>2007-08</td>
<td>24</td>
<td>29</td>
<td>19</td>
</tr>
</tbody>
</table>

Graph showing the increase in area, productivity, and yield from 1998-99 to 2007-08.
Rising share of Bt cotton in India

Source: Cotton Advisory Board, 2009
Impact: India emerged as 2\textsuperscript{nd} largest exporter of cotton

Source: Cotton Advisory Board, 2009
Next Surges could be in Hybrid Maize, Bt Brinjal??, and so on??

- Production of maize increased by 60% b/w 2000/01 to 2007/08; role of hybrid maize; and India exported about 3 mt of maize in 2007-08.

- Mahyco’s Bt brinjal next? It has gone through several hops of government trials and now stuck at political level…

- There are several other biotech crops that are at field trial stage; cabbage, cauliflower, okra, potato, rice, etc.

- If the experience of other Bt crops is like that of cotton, global markets of several crops may be impacted
Food security and Diversification towards High Value Agl. (livestock, F&V, and fishery)

Rice & Wheat Stocks in the Central Pool

Buffer stock (million tonnes)

- Wheat
- Rice
- Norm

Year:
- 1992-93
- 1993-94
- 1994-95
- 1995-96
- 1996-97
- 1997-98
- 1998-99
- 1999-00
- 2000-01
- 2001-02
- 2002-03
- 2003-04
- 2004-05
- 2005-06
- 2006-07
- 2007-08
- 2008-09
- 2009-10
Gradual Integration with world economy: Increasing share of agri trade in agri GDP

Source: Agricultural Statistics at a Glance, GoI 2008
Rising Role of Corporate Players in HVCs

- Nestle working with more than one lakh farmers in Punjab for its dairy operations; Private sector likely to overtake co-operatives in the dairy sector by 2012… & many more

- Pepsi working with 11000 farmers in West Bengal, Maharashtra, Punjab etc. for its potato chips operations;

- Mahindra Shubhlabh Services Limited (MSSL) largest grape exporter in 2008

- Bharti Del Monte largest exporter of baby corns in 2008/09.
Challenges: Structural Transformation of Agri-food System - Consolidating top and fragmenting bottom

Source: Gulati & Ganguly 2009
Retail Surge: Growth of Organized Food & Grocery Retail highest though from a low base

Organized Food & Grocery Retail Sales of selected 10 Retailers (2002/07)

- India: 72.4%
- Viet.: 63.4%
- China: 26%
- Thail.: 22.5%
- Indo.: 20.8%
- Phill.: 18.6%

Note: Food sales include food, beverages, tobacco products, drugstore items and small everyday non-foods household goods.
Source: Planet Retail website, Accessed on 20th May, 2008
Fragmenting Farm Sector
~swelling bottom

Source: NSSO, 2006
But back end is weak…
~emergence of RBHs to take up this challenge

Source: Gulati & Gupta, 2008
Some Key Policy Choices: Three “I”s
Increase Investments and Rationalizing subsidies

Table: Returns in Growth to Investments and Subsidies

<table>
<thead>
<tr>
<th></th>
<th>1960s-70s</th>
<th>1980s</th>
<th>1990s</th>
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<tbody>
<tr>
<td>Returns in Agricultural GDP (Rs per Re. Spending)</td>
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<tr>
<td>Roads</td>
<td>19.99</td>
<td>8.89</td>
<td>7.66</td>
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<td>Education</td>
<td>14.66</td>
<td>7.58</td>
<td>5.46</td>
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<tr>
<td>Irrigation Investment</td>
<td>8.00</td>
<td>4.71</td>
<td>4.37</td>
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<tr>
<td>Irrigation Subsidies</td>
<td>5.22</td>
<td>2.25</td>
<td>2.47</td>
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<tr>
<td>Fertilizer Subsidies</td>
<td>1.79</td>
<td>1.94</td>
<td>0.85</td>
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<tr>
<td>Power Subsidies</td>
<td>12.06</td>
<td>2.25</td>
<td>1.19</td>
</tr>
<tr>
<td>Credit Subsidies</td>
<td>18.77</td>
<td>3.00</td>
<td>4.26</td>
</tr>
<tr>
<td>Agricultural R&amp;D</td>
<td>8.65</td>
<td>7.93</td>
<td>9.5</td>
</tr>
</tbody>
</table>

Some Key Policy Choices (contd…)

- **Reform Institutions**
  - Implementation of the amended APMC Act
  - Abolishing ECA that restrict movement of selected agri commodities
  - Create a vibrant land lease market

- **Re-adjust Incentives**
  - Delink procurement price from MSP
  - Downsize the role of FCI, encourage private sector participation
  - Promote social safety net & livelihood programs, Eg; NREGS