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sustainable solutions for ending hunger and poverty

Getting Indian Agriculture Moving *From 2.3% to 4.1% Growth Trajectory*

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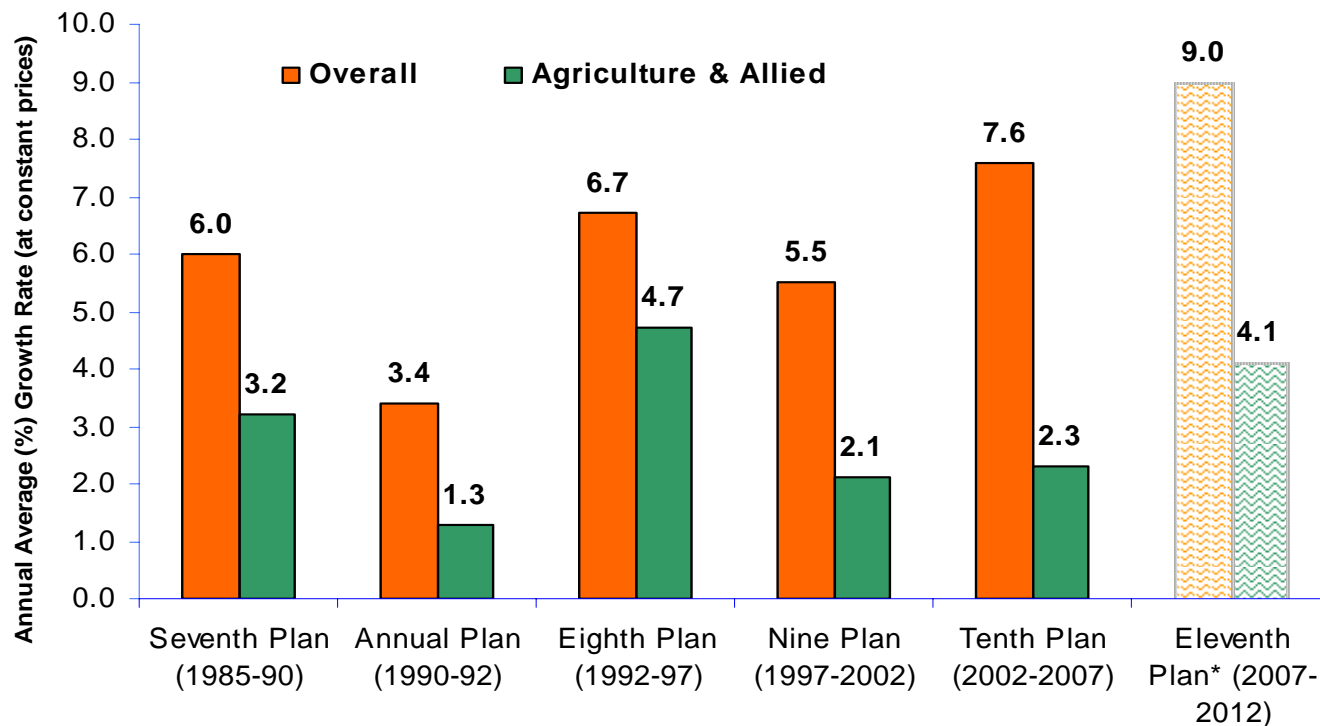
3rd International Conference on Linking Markets & Farmers:
Exploring Practices to Foster Economic Growth in Rural India

New Delhi

March 11-15, 2007

A decorative graphic at the bottom of the slide consisting of a thick, curved line that starts high on the left and curves down to a low point in the center, then rises slightly on the right. The area below this line is filled with a light yellow color, and a thin, light purple line follows the curve of the main graphic.

Growth Rates in Agriculture and Overall GDP



Source: Economic Survey 2006-07, GOI. *Towards Faster and More Inclusive Growth: an Approach to the 11th FYP, December 2006, Planning Commission, GOI

Note: Growth rates prior to 2001 based on 1993-94 prices and from 2000-01 onwards based on new series at 1999-00 prices



Key Elements of Government Strategy:

- **Supply side:** Double the rate of growth of irrigated area; create additional 11 million ha irrigation in the XI Plan (2007-12) through Bharat Nirman programme
- **Demand side:** National Rural Employment Guarantee Scheme (NREGS) to augment the demand for food (grains) amongst poor

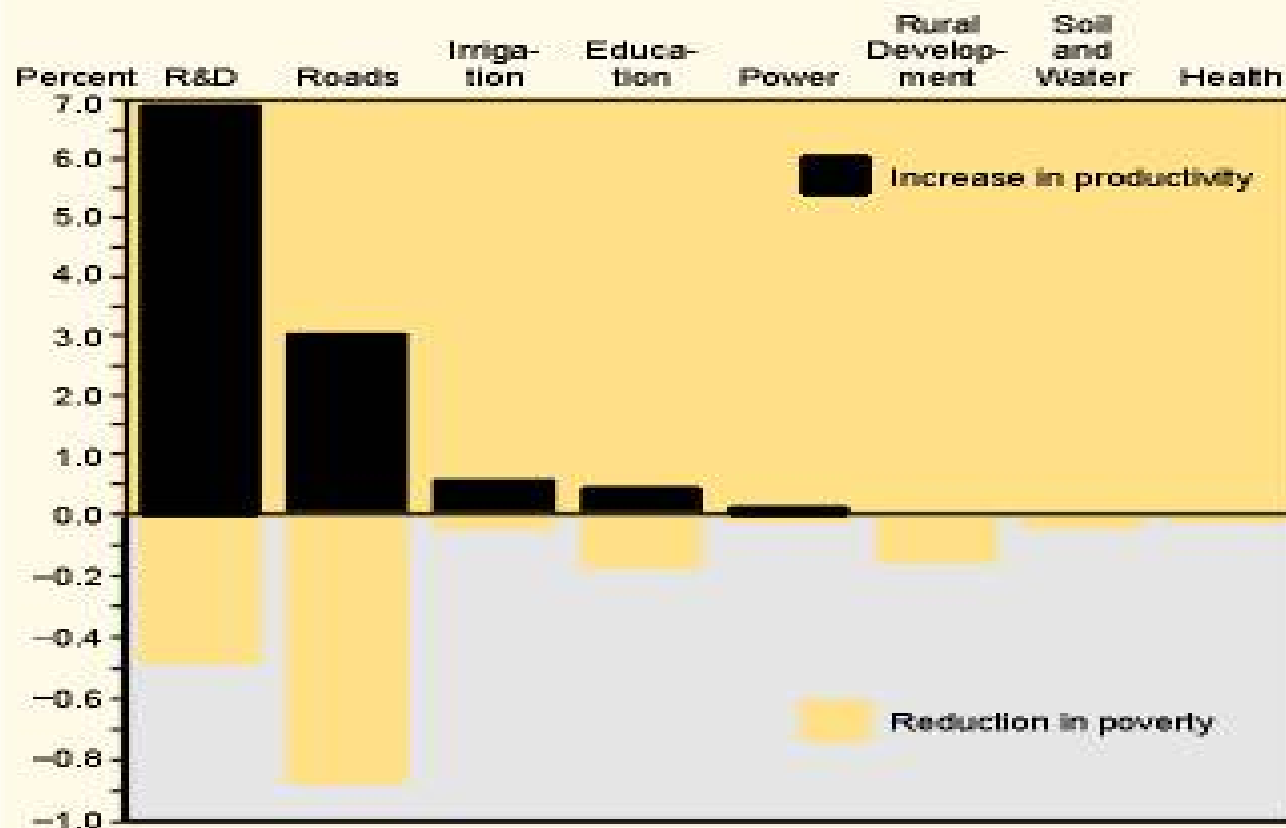


Is irrigation the best candidate for public investment?

IFPRI Study (Fan, Hazell and Thorat, 1999)

Figure 2

Increases in growth of productivity and reduction in poverty as a result of additional government expenditure



Note: Based on spending of an additional Rs 100 billion in 1993 constant prices.

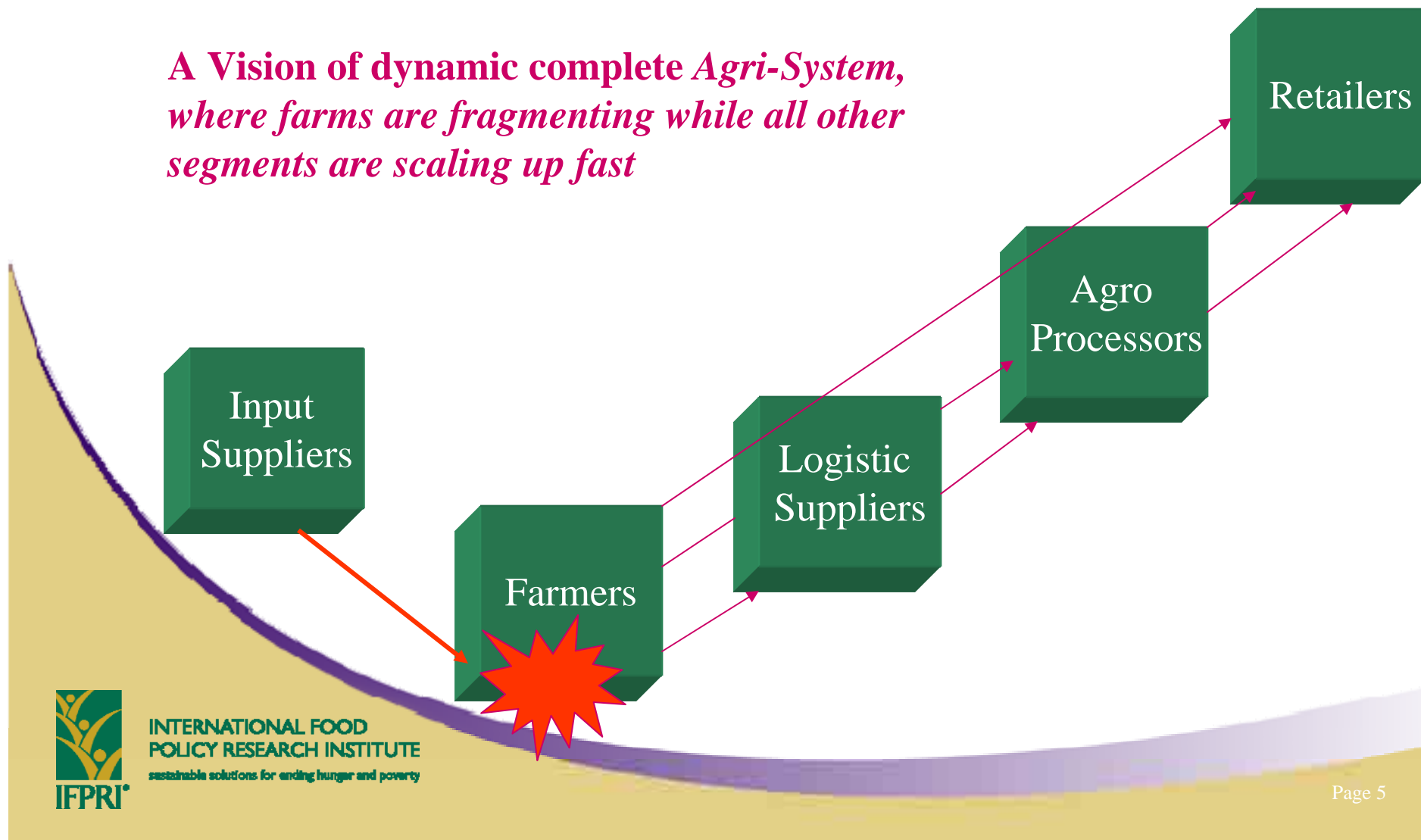


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What is Missing in both approaches?

*A Vision of dynamic complete Agri-System,
where farms are fragmenting while all other
segments are scaling up fast*

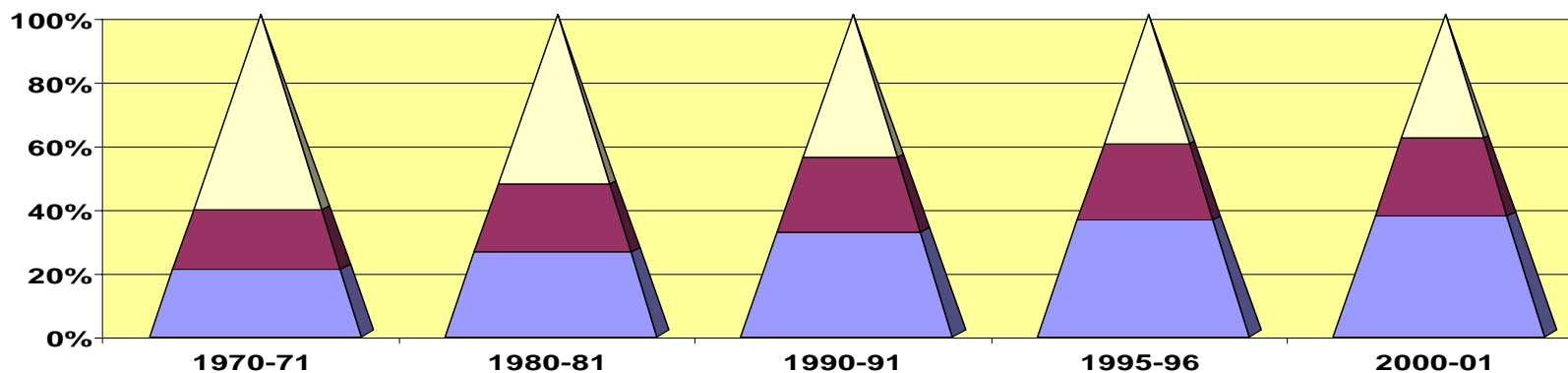


Indian farm reality: fragmenting farms and swelling bottom

Challenge of linking small holders to supermarkets

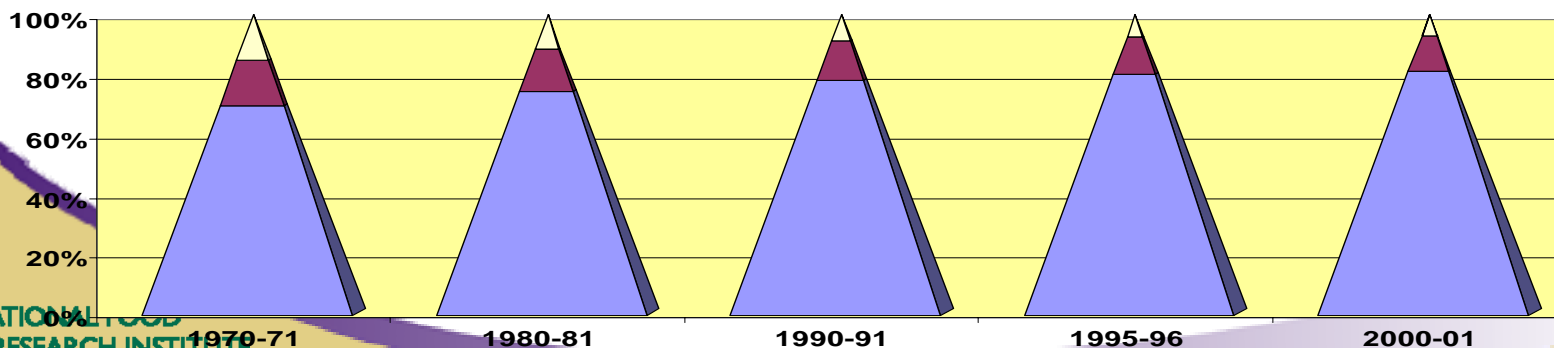
■ Less than 2 hectares ■ 2-4 hectares □ 4 and above hectares

Area of Holdings-India



Avg Size 2.3 1.82 1.55 1.41 1.37

Number of holdings-India



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Source: Agricultural Census Division, India

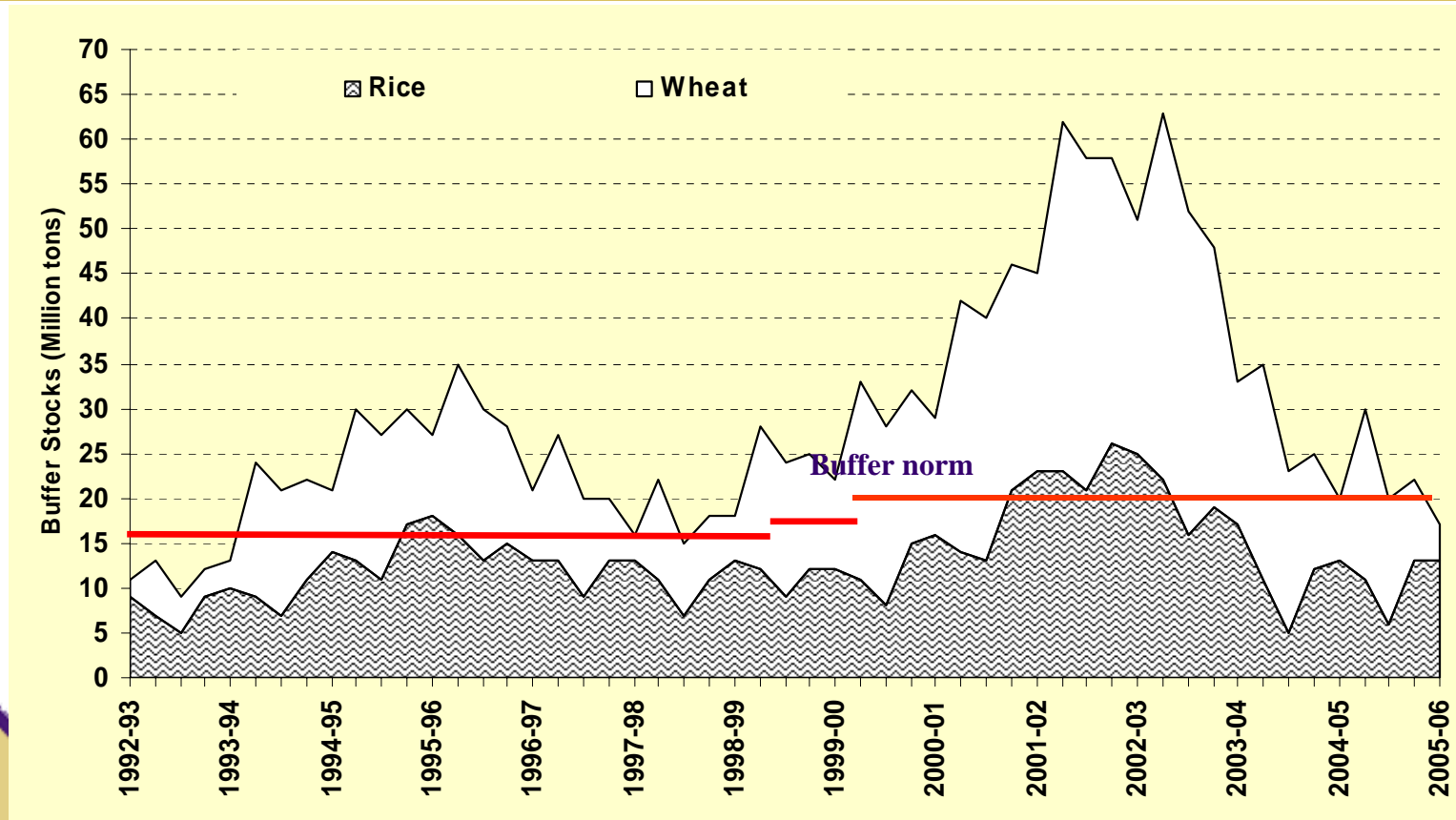
Indian plate reality: consumption changing in favour of HVCs in all Income Groups

(Per capita Consumption of various Food Items (kg))

	Lower Income Group (30%)			Upper Income Group (30%)		
	1983	1999-2000	% Change	1983	1999-2000	% Change
Cereal	147.1	132.4	-10.0	194.3	154.6	-20.4
Pulses	7.6	6.9	-9.2	17.7	16.6	-6.2
Edible Oil	2.6	4.6	76.9	7.3	13.7	87.7
Vegetables	36.0	53.9	49.7	65.2	90.8	39.3
Fruits	1.6	4.2	162.5	6.4	18.2	148.4
Milk	15.7	20.5	30.6	89.7	117.2	30.7
Meat, Egg, Fish	1.9	3.8	100.0	4.8	10.6	120.8

Indian policy reality: grain self-sufficiency centric

Outcome: widely fluctuating grain stocks with Central Pool

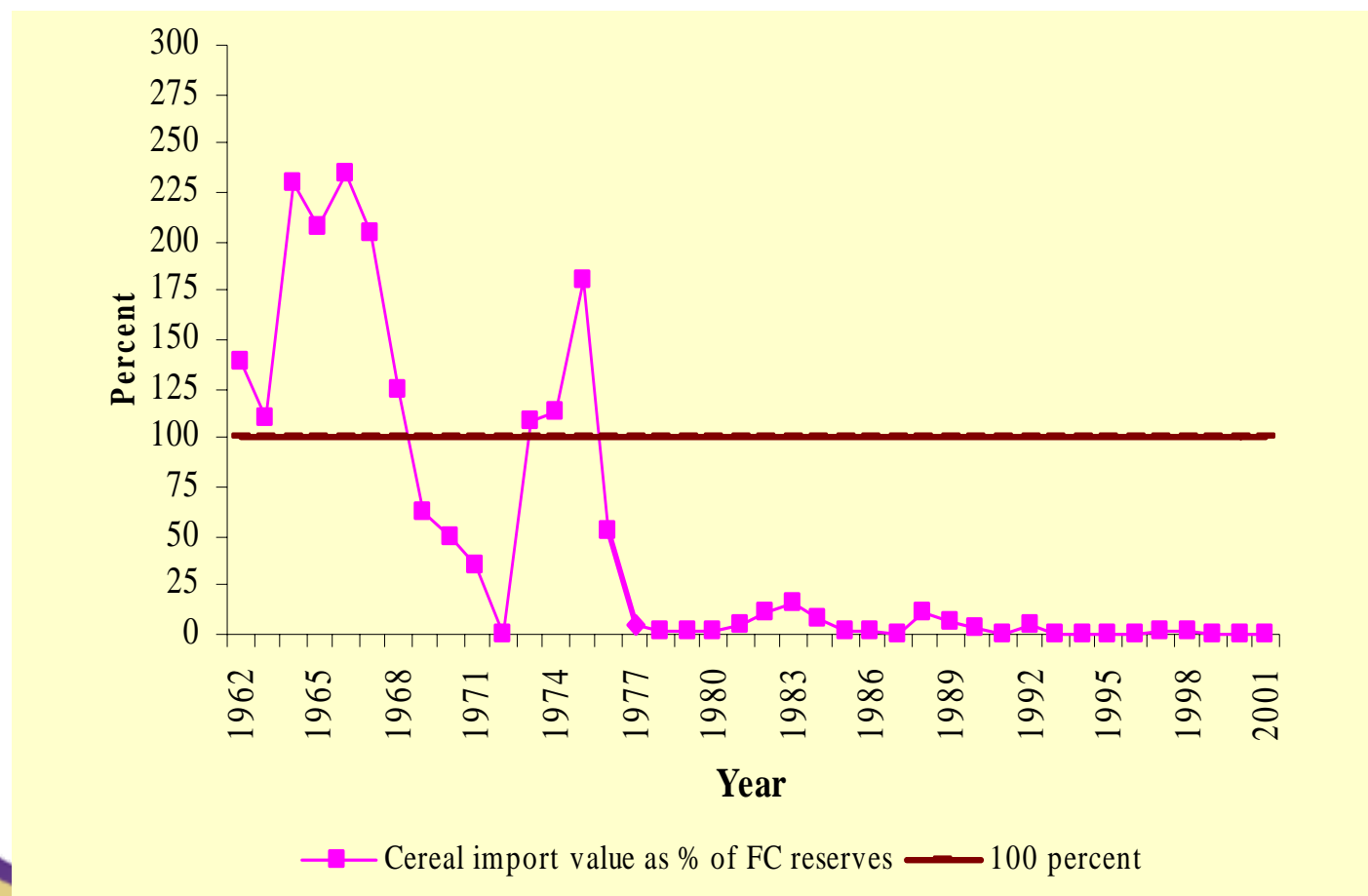


Source: Economic Survey, various issues

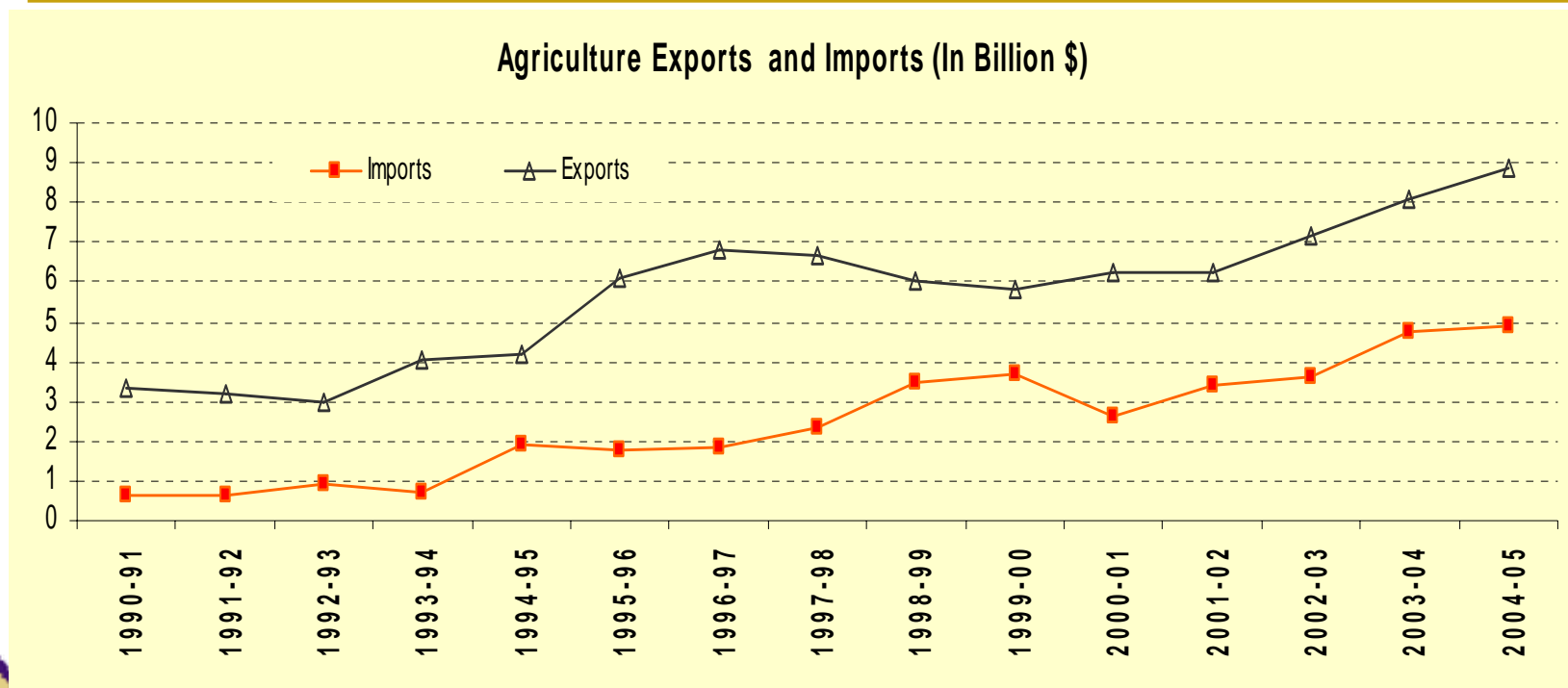


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Why obsession with grains self-sufficiency in the wake of bulging forex reserves? (Import Capacity: Cereal import values as percent of Foreign Exchange Reserves)



Import capacity: even within agriculture, India has trade surplus



Note: Rupees converted into dollars using exchange rates (from Economic Survey, 2005)

Source: Agriculture Statistics at a glance, 2005



Read the past to forecast future: Increasing Share of High Value Agriculture

Commodity	Share in gross value of agricultural output (%)			Compound annual growth (%)	
	TE 1982/83	TE 1992/93	TE 2002/03	1980/81 to 1991/92	1992/93 to 2002/03
Crops	77.3	74.3	70.9	2.8	2.5
Foodgrains	33.0	31.8	26.8	2.8	1.4
Fruits and vegetables	14.0	13.5	17.9	2.5	6.0
Livestock	20.0	22.7	25.1	4.5	3.8
Fish	2.6	3.0	4.0	3.7	5.0
Total agriculture	100.0	100.0	100.0	3.2	2.9
High-value	32.5	35.9	44.4	4.1	5.0
Rest	67.5	64.1	55.6	2.7	1.5

Source: Calculations based on data from CSO



But to move faster towards HVA, reforms needed in Foodgrains Policy

- De-link Support Price from Procurement Price
- Dovetail Domestic price policy (futures markets) with Tariff Policy, and use Foreign Exchange reserves to play global markets
- Change Commission on Agriculture Costs and Prices (CACP) to Agriculture Tariff Commission
- Develop Warehouse Receipt System, Futures Trading, Commodity Exchanges, etc.
- Downsize the operations of FCI and target the PDS (Gradually move towards an *income transfer safety net* (Food Coupon System))



Create Investments

- **Investments in infrastructure** (*roads, railways, ports, storage & cold chains*)
 - Fan, Hazell & Thorat (1999) shows the considerable impact of investment in roads on poverty alleviation.
- **Investments in R&D**
 - To push forth the production frontier
 - Develop processable varieties of high value commodities



The way forward: Investing in institutions to effectively link farmers to markets in High Value Agriculture

- Vertical linkages between *farming, processing* and *retailing* are not so strong (it is critical to take care of production and market risks)
- Scaling up of opportunities require reforms in
 - Land laws (ceiling and lease markets)
 - Taxation policy of primary products (purchase tax, mandi fees, commission agents' fee)
 - Movement restriction and zoning problems, (APMC, ECA)
 - FDI in retail
 - Extension services catering to information and technology



Linking farmers to markets: ITC Model of Choupal Fresh

Key Features

- Providing **Extension** services (*technical know-how, market information*)
- Freedom to sell anywhere at prevailing market price, ITC offering a buying platform

production and market risks are borne by the farmer.

On retail front, instead of super markets, thinking of creating a chain of “push carts”



The outcome: “The Best Tomatoes in Hyderabad” - *A Case Study*

GMed is assisting ITC to develop a reliable procurement system of direct purchase from small farmers through extension services

- Name: Bhupal Reddy (ITC Lead Farmer); Land: 2 acre
- Farming experience: 20 years
- Tomato Yields*: Increased from 10-15 ton/acre in traditional fields to 25-30 tons/acre in modern fields
- Saved 40 percent on fertilizer and pesticide costs
- Saved 10 % on commissions, etc. paid to mandi traders through direct selling to ITC



Source: USAID Newsletter, No.1, September 25, 2006

*IFPRI Field Visit, March 2007



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Bharti (fieldfresh) Model: exports of HVA

- **fieldfresh**, Agri Centre of Excellence situated in Ladhawal, Punjab
- Acquired 300 acres of farm land- a fulcrum point of R&D, information & knowledge dissemination and crops & trials
- Leased in 4,200 acres from 78 farms to produce beans, snow peas, carrots, okra, baby corn, etc
(India's field of greens, John Eliot, Fortune, CNNMoney.com, Aug2006)
 - The farm includes 42 acres of state-of-art protected cultivation (green & glass houses, poly-houses and net houses)



The Outcomes

- Farmers lease out their lands at a rent broadly equal to what they were earning from wheat and rice; can also work on their fields for a wage
- Production and Price risks are borne by the firm
 - Farmers do not participate in profits/losses incurred



How do we judge: which way to go??

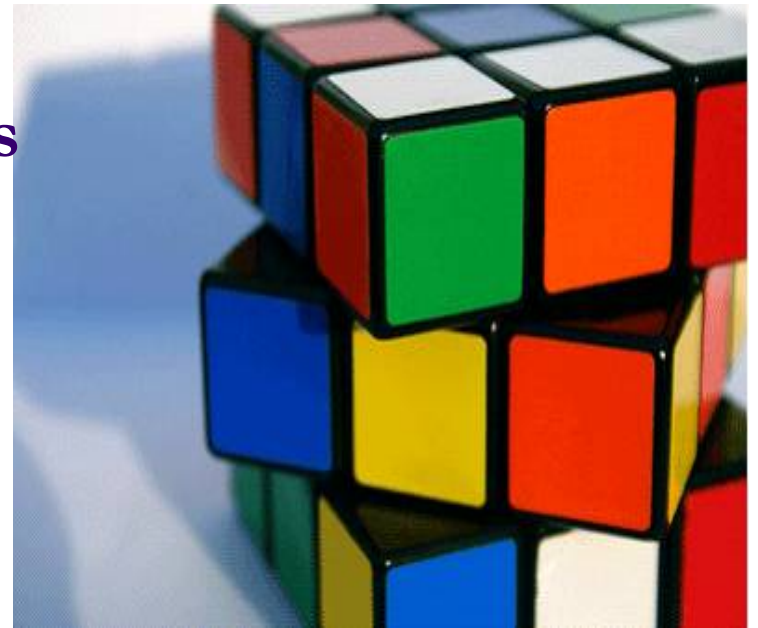
- Innovative Institutions and Organizations Linking smallholders to Modern Value Chains
- Mapping and Designing Institutions for *ICSS*

I-Inclusiveness

C-Competitiveness

S-Sustainability

S-Scalability



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