

INDIAN AGRICULTURE

An Overview

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Session overview

- To review some basic facts on agriculture
- To examine the need for focus on agriculture
- To analyse trends in agricultural growth
- To look at farmers' issues
- To look at policy challenges
- To examine some good practices
- To delineate an agenda for district officers

Basic Facts - 1

- Agriculture a **State subject** – so primary thrust in the realm of States
- Population - **>125 cr**; **58% workforce** in agriculture (*Source: Economic Survey*)
- Foodgrains production – **265.6 m MT** in 2013-14
- **121 m** farm holdings, **127 m** cultivators and **107 m** agricultural labourers
- Average size of **operational holdings** – **1.3 hectare**, small & marginal holdings – **82%**, **61% < 1 ha**
- **Largest** area in the world under rice and wheat
- India now **net exporter** of foodgrains – **21 billion \$**

Basic Facts - 2

- Decline in Agriculture contribution in **GDP** from 36.4% in 1982-83 to **18%** in 2014-15 (as per new CSO series)
- Contribution of Agri-Allied Sectors in **Gross Capital Formation 6.8%**; share of private sector in GCF in Agri-Allied Sectors is **84%**
- **Agricultural Credit** supply **Rs. 7 lakh crore** in 2013-14
- Contribution of **allied sectors** (horticulture, livestock, etc) growing faster; growth rate of livestock & fisheries **4.8%** in XI Plan
- **MSP** for principal crops doubled in last 10 years
- Progress on **irrigation** tardy – only **42% cropped area irrigated**; created potential not utilized
- **Over-reliance on ground water** – serious crisis in many states due to over-extraction

Why Agriculture?

Because...

- **58%** workforce employed in agriculture with around **40%** rural poverty - classical shift of labour with structural change of economy not seen in India
- **Growth** of most Asian economies has been supported, if not entirely based, on fast agricultural growth – rural surpluses traditional economic growth drivers
- Traditional causal link between rural **poverty reduction** and agricultural growth – decline in rural poverty levels from 45 to 23% from 1993 to 2012
- At policy level, agriculture should be **integrated with rural development** – in practice divorced – worse, agriculture less romantic!

Crop Husbandry

Crop	CAGR (2000-2012)	CAGR (2000-2012)
	Production	Yield
Rice	1.78%	1.78%
Wheat	2.61%	1.24%
Coarse Cereals	3.01%	3.85%
Pulses	3.69%	2.06%

Source: Economic Survey

Agricultural Growth (CAGR 2000-12)

Good

- Gujarat – 9.8%
- Rajasthan – 9.6%
- Chhattisgarh – 8.9%
- MP – 7.4%
- Jharkhand – 6.9%
- **All-India – 3.3%**

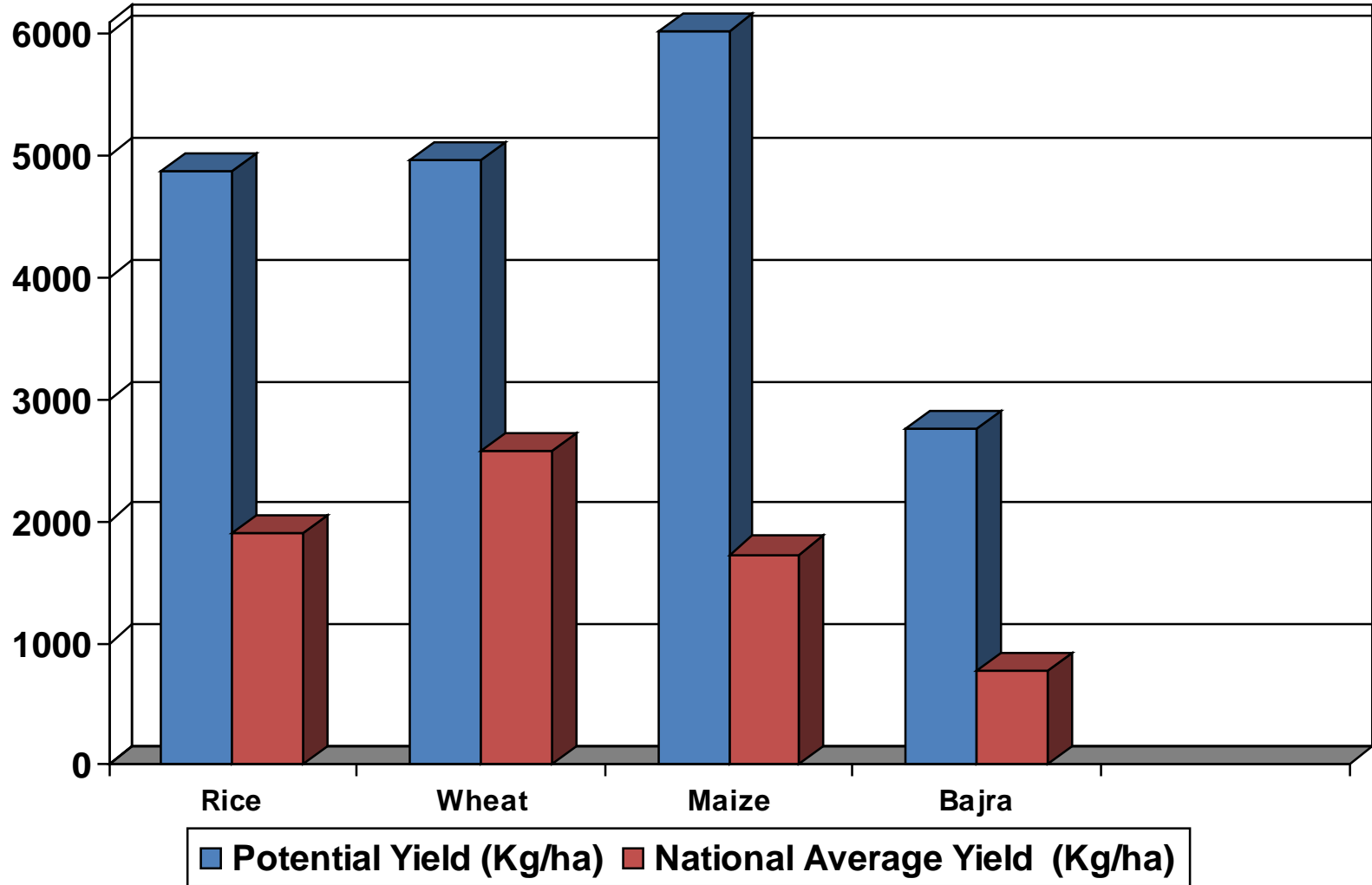
Middling

- AP & Maharashtra – 4.1%
- Bihar – 3.9%
- Odisha & HY – 3.8%
- HP & Goa – 3.7%

Poor

- TN & J&K – 2.8%
- UP – 2.3%
- Punjab – 1.9%

Yield Gaps in Major Crops



Comparative International Yields

Rice (Paddy)		Wheat	
Country	Yield (in kg/ ha)	Country	Yield (in kg/ ha)
World	4300	World	3000
India	2400	India	3150
Punjab	3950	Punjab	5000
South Korea	6700	France	7500
Vietnam	5700	China	4800
China	6600	USA	3000

Source: USDA

Rainfed Agriculture

- Covers around **200 m ha** or **56%** of **cropped area**
- Accounts for **48%** of area under **food crops** and **68%** under non-food crops
- Contributes **45%** of cereals, **66%** of oilseeds and **77%** of pulses production
- Holds the **key** - **40%** of future foodgrains increase expected to come from rainfed areas
- Greater **focus on dairying, horticulture & allied activities** in such areas

Best Practice - *Bhoochetana*

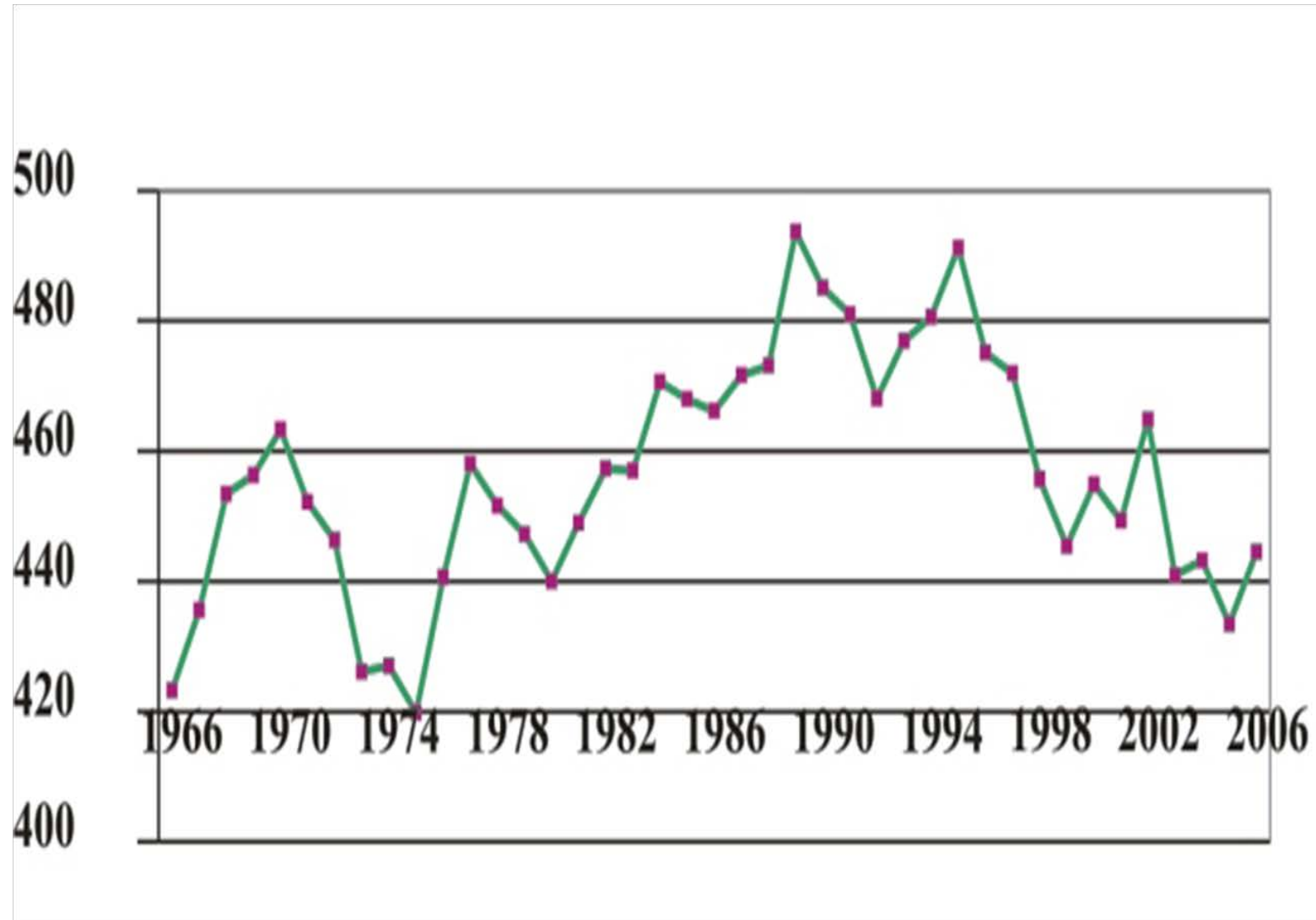
- Bhoochetana of Karnataka one of the foremost integrated efforts in dryland farming – state has 2nd largest rainfed area
- Started in 2009 in mission mode to increase productivity by 20% in 4 lakh ha in 4 years; 1.27 m ha in phase II
- Piloted with assistance of ICRISAT Hyderabad through consortium of Agriculture Department, Watershed Department, SAUs and CBOs
- Holistic '*seed to food*' approach – focus on packaged inputs, soil micro-nutrients and farmers training through local para-workers
- Impressive results – increase in rabi productivity by 32-66% and kharif 23-43%

Food Security & Agriculture

“Food Security is a situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life.”

- General **decline in per calorie consumption** in rural India & per capita availability of foodgrains while India has been a net exporter
- Right to Food Act – need for adequate **production to address demand-side issues**
- Key lies in achieving a significantly **higher growth** than population growth rate
- Need for greater focus on **coarse cereals** for food security in rainfed areas

Per capita availability of foodgrains (in gms per day)



Farmers' Issues

- Indian agriculture in the throes of **serious crises**
- High levels of **rural indebtedness** despite improving credit supply – **42%** farm debt owed to **moneylenders**
- Overcoming **small operational holdings**
- **Plateauing farm yields** – sustainability concerns
- Maximizing output under **rainfed conditions**
- Assured **marketing** – issue of **MSP**
- Seek **higher incomes**
- Better knowledge and trained manpower - poor **extension services**

Policy Challenges

- To maximize foodgrains production for **food security**
- To provide **higher incomes** to farmers for rural prosperity
- To offset by challenge to keep inflationary pressures at bay – **producers vs. consumers interests**
- To use agricultural growth to **mitigate rural poverty**
- To ensure agricultural **sustainability** - water & soil-nutrient balance and increasing yields
- To balance **international volatility** vs. consistency in **trading policy**
- To mitigate effects of **climate change**
- In sum **4 Is, i.e. Investments, Incentives, Institutions & Innovation**

District Agricultural Plan

- *Sine qua non* for availing assistance under RKVY
- Entails “**bottom-up**” planning approach
- District Agricultural Plan (DAP) provides institutionalized **platform for convergence**
- **Strong potential** under **MGNREGS**
- Requires strong commitment from **district head** – usually, recipient of general apathy
- Allows regional and sub-regional **autonomy** in planning and implementation

Political Economy of MSP

- MSP – initially introduced for Wheat and Paddy
- From minimum support price, now effectively constitutes maximum support price
- Ensures strong economic incentive in terms of assured marketing and fair price – yet leads to market distortions
- Benefits harnessed most effectively by *kulak* farmers of NW India and pockets of Krishna-Godavari & Cauvery delta
- Used as major policy instrument by governments to politically woo large farmer vote bank
- Clamour to increase MSP – doubling of MSP of wheat and rice in UPA tenure

Shanta Kumar Committee Report

- As per NSSO data (70th round), against 90 m agricultural households, only 2.52 m HH sold paddy to procurement agency – of which only 27% at MSP
- In wheat, only 2.11 m HH sold to procurement agency with 35% of these at MSP; in sum, 5.21 m HH benefited directly from procurement, i.e. 5.8% of total agri-HH
- In some states, 70-80% of marketable surplus being procured by government agencies – ‘crowding-out effect’ of private sector under monopsony
- Major leakages in distribution – HLC estimates it 46.7% (using NSSO data) with some states ranging upto 90%; both exclusion & inclusion errors
- Foodgrains with FCI far in excess of buffer norms – leads to ‘deadweight losses’ – estimated by HLC at Rs. 100,000 crores

Miscellaneous Issues

- **Research & Extension** – increase expenditure on R&D to 1% of Agri-GDP, need to also focus on non-formal education
- **GCF in Agriculture** – increasing positive trend since 2007
- **Land Reforms** – complimentary ones needed
- **Marketing** – reforms needed to modernize, end state monopolies & improve post-harvest management – role of Mandi Boards and Producer Organizations
- **Allied Sectors** – dairying, poultry, fisheries and horticulture hold great promise for increasing rural incomes – possibility of over **6%** growth
- **Spot & Future Markets** in agricultural products

Some Best Practices

- **System of Rice Intensification (SRI)** – being slowly adopted in India
- **3 Cut, 3 Up** policy of Vietnam – to help reduce costs - *cut* seedling varieties, *cut* chemical fertilizers and *cut* chemical pesticides; *increase* productivity, *increase* quality, *increase* profit
- China's **National Agricultural Research System (NARS)** – bifurcation of research
- Korean **Green Revolution** story – Land Reforms, Tongil Rice; High Mechanization
- **CROPSAP** in Maharashtra – integrated pest management and advisory services
- **SERP** in AP – innovative use of small plots

District Level – To Do List

- To review the working of District Agriculture Plan in your district
- To dovetail funds under various programmes under DAP
- To work on District Micro-Irrigation Plan under PM Krishi Sinchai Yojana
- To implement Kisan Soil Card initiative well
- To promote non-formal education of farmers and training of farm hands through KVKs and NGOs
- To devote more time to agriculture!

Thank You