



# NSAI's ROLE IN ENCOURAGING SEED PRODUCTION AND MARKETING

**Dr. N. K. Dadlani**

**Director**

**National Seed Association of India**

**6<sup>th</sup> International Hybrid Rice Symposium**

**10-12 September 2012, Hyderabad, India**

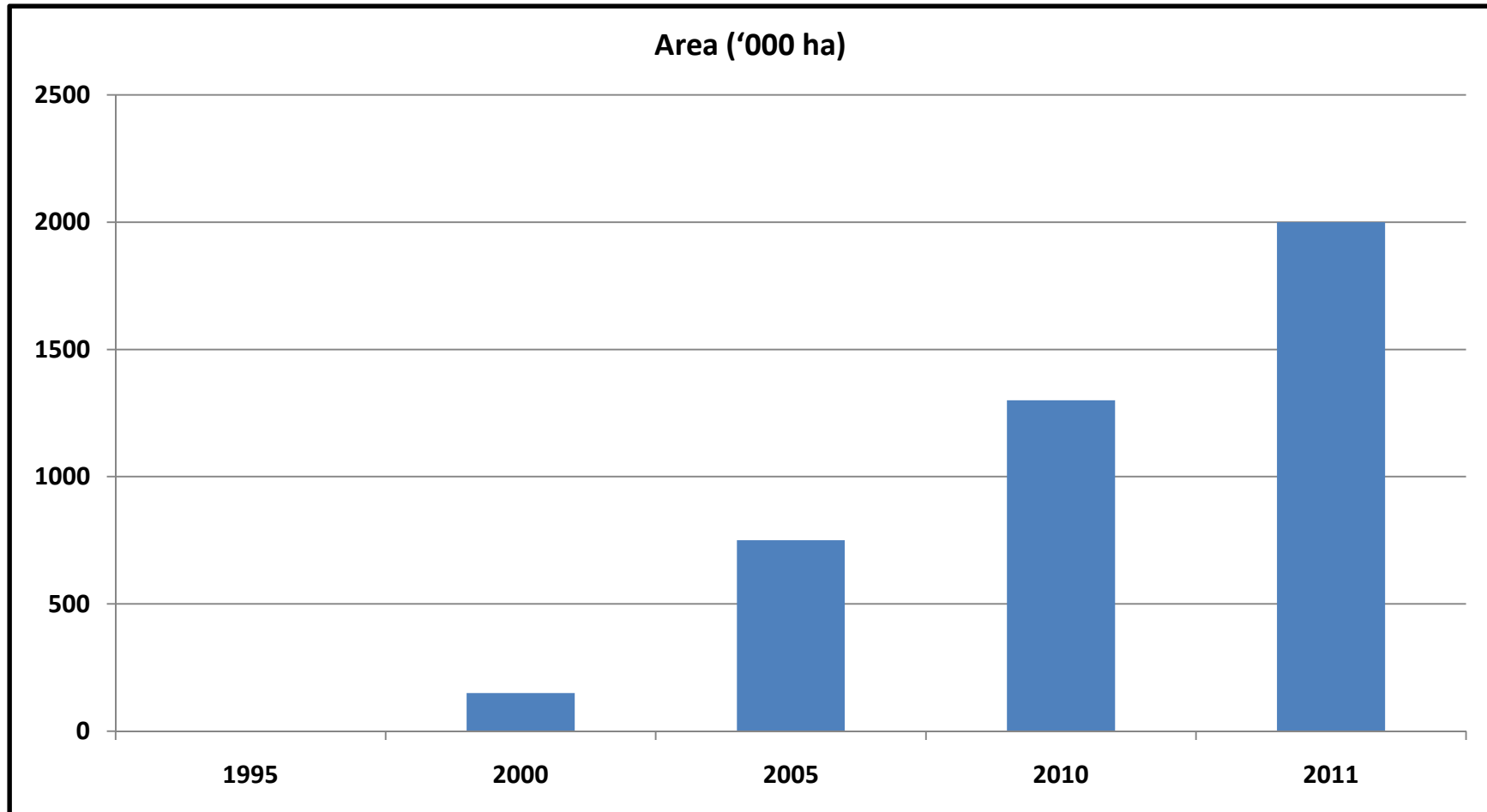
# Why Hybrid Rice ?

- **Growing demand (30% more by 2025-2030):**  
**Need to increase hybrid penetration from 5% to 35%**
- **Declining resources (land + water):**  
**HR has potential to give upto 35% more yield under similar conditions; also hardy and successful in challenged production ecologies (light soil / saline / alkaline / water shortage)**
- **Plateauing yield levels in traditional varieties:**  
**Increase yield with better genotype & minimise yield losses with biotic & abiotic stress tolerance**

# Hybrid Rice Benefits

- Higher ROI for farmers through better yield (each extra MT of produce = Rs. 10,000 (\$ 200) additional per hectare)
- Reduced water requirement (shorter duration; efficient water absorption with strong root system)
- Additional rural employment generation of 65-80 person days / ha (mostly women) in seed production
- Skill development of seed producing farmers

# Adoption of Hybrid Rice in India

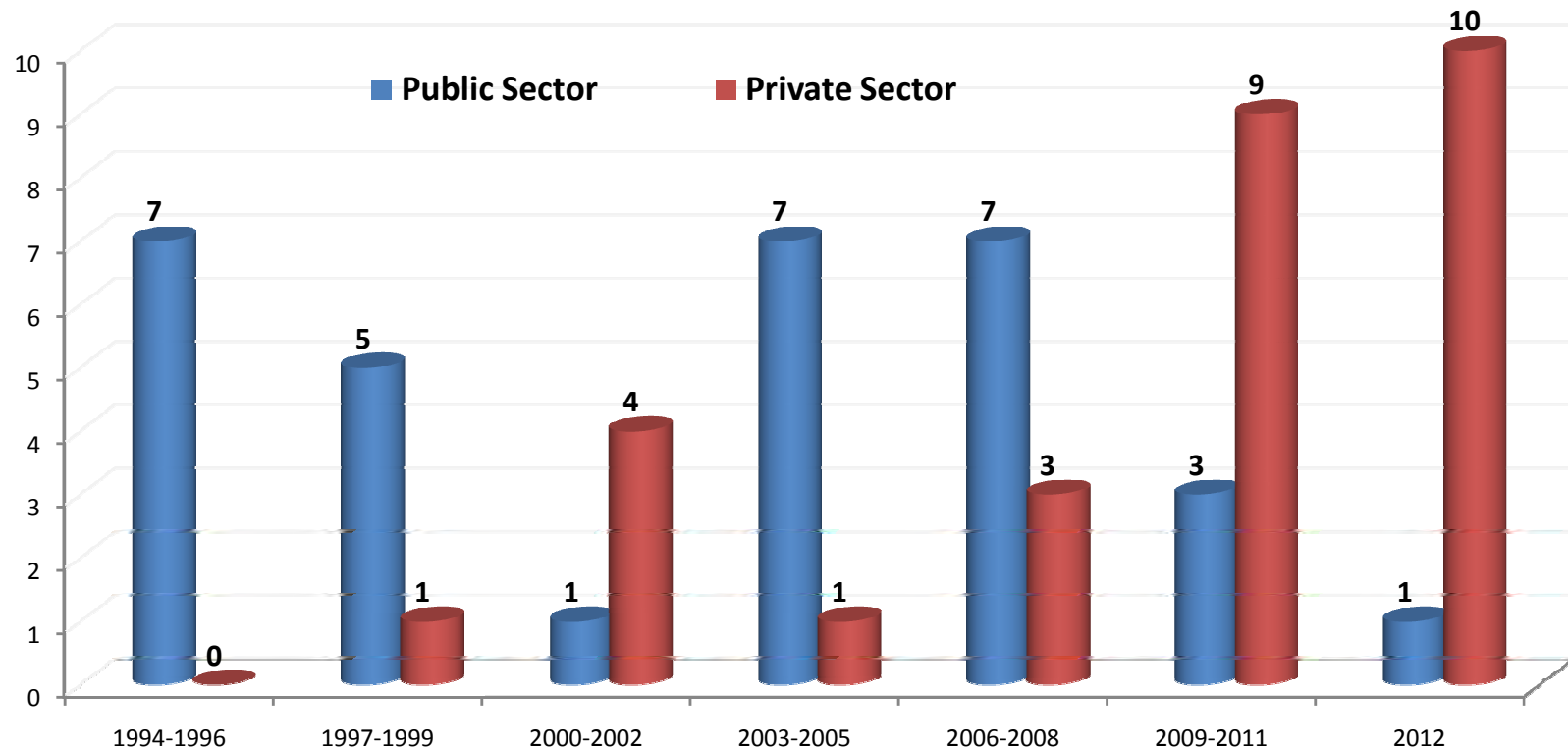


**Hybrid Rice Acres: 2.1 million**

# Challenges in adoption growth

- **Low participation in Government distribution systems**
- **Absence of specific protocol for quality testing of commercial produce**
- **Varying market procurement prices**
- **Low availability of location specific agronomical package to harvest potential yields**
- **Currently adoption is in low management & low input areas with little or no penetration in high management areas**

# Rice Hybrids Development in India



**Total Number: 59**  
**Public Sector: 31**  
**Private Sector: 28**

# Portfolio Strength

- Higher yield
- Duration fitment: Early; Mid early; Medium; Late
- Acceptable quality (grain & milling)
- Stress tolerance (Moisture / Diseases / Pests)
- Season suitability: Kharif / Boro

# Public Private Partnership:

## *Public Goods for Public Good*

Hybrid (Breeder)	MOU with
DRRH-2 (DRR, Hyderabad)	Bioseed; Charoen Pokphand Seeds; Sampoorna Seeds; Neo Seeds; Pratham Biotech; Vicky's Agri Sciences;
DRRH -3 (DRR, Hyderabad)	Ankur; DevGen; Ganga Kaveri; IFSSA; JK Agrigenetics; Kaveri
PUSA RH 10 (IARI, New Delhi)	Advanta; Amareshwara; APSSDCL; Atash; BBNL; Bhavani; DevGen; Ganga Kaveri; Geo Technologies; IAHS; IFSSA; JK Agri Genetics; Krishidhan; Mahyco; Namdhari; Nath Biogene; Yashoda; Zuari Seeds;
PSD-1 & PSD-3 (GBPUAT, Pantnagar)	Syngenta
CORH -3 (TNAU, Coimbatore)	Rasi Seeds
AJAYA & RAJALAKSHMI (CRRI, Cuttack)	Annapurna Seeds; Vicky's Agri Sciences
KRH – 2 (UAS, Mandya)	Namdhari
SAHYADRI – 1 (BSKKV, Karjat)	Syngenta
JRH 4 & JRH 5 (JNKVV, Jabalpur)	Vicky's Agri Sciences



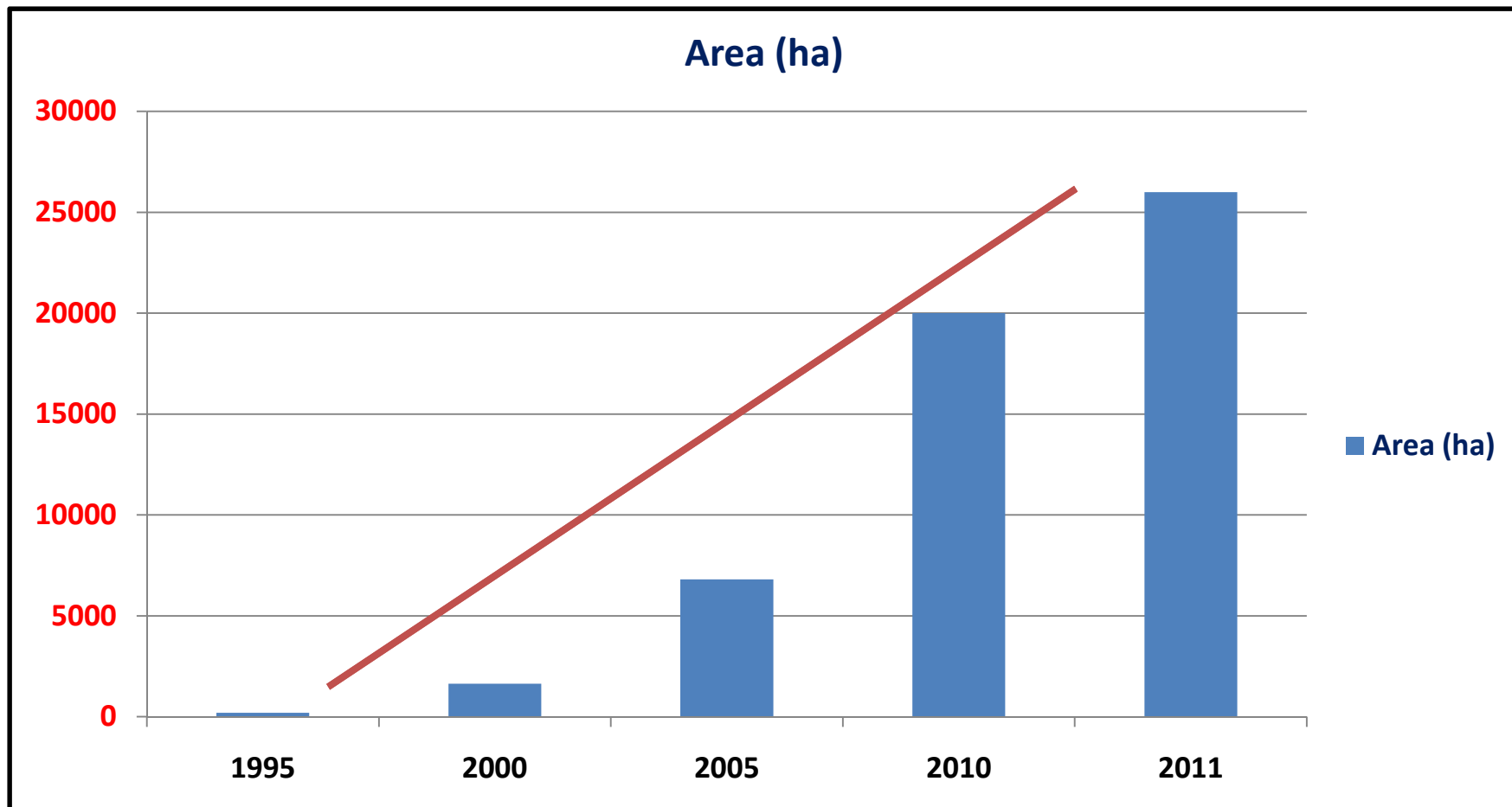
# Way Forward

## Research Challenges



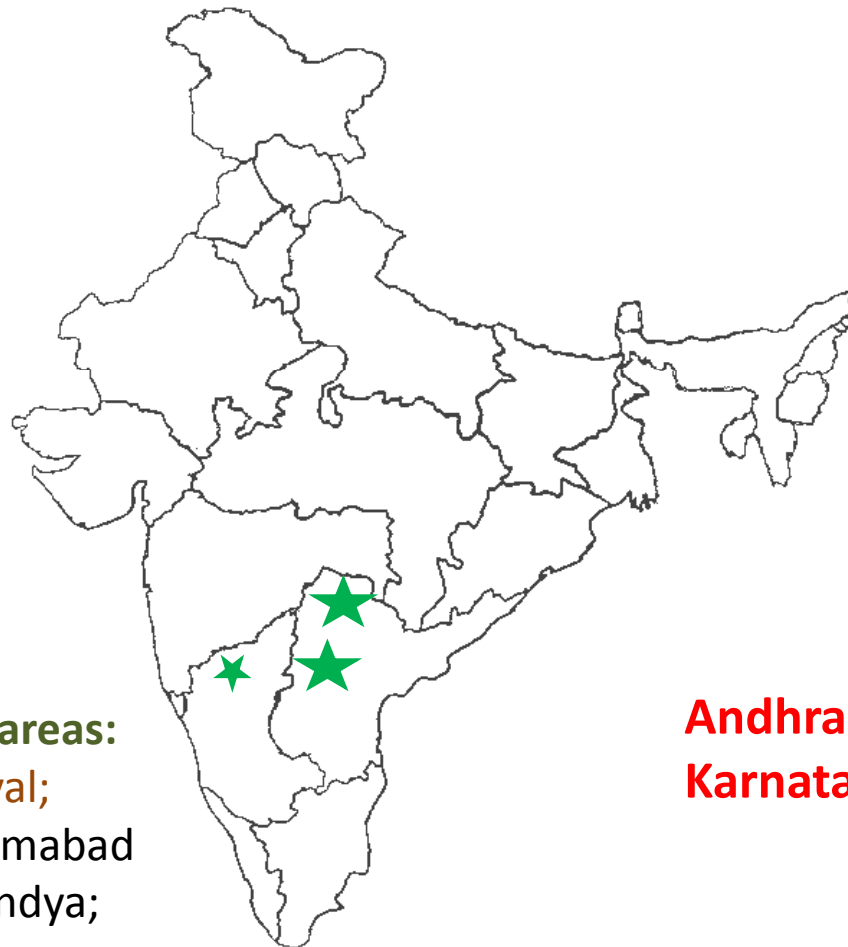
- Achieving higher magnitude of heterosis
- Developing full maturity duration hybrids (with high per day productivity & high sink capacity)
- Developing hybrids tolerant to biotic / abiotic stress
- Development of stable & diverse CMS lines
- Developing hybrids with better eating & cooking quality
- Better movement of breeding lines across borders for evaluation, etc.

# Hybrid Rice Seed Production



**Avg. hybrid seed yield increased from 0.8 t to 1.5 t / ha**

# Hybrid Rice Seed Production



**Major seed production areas:**

**A.P.:** Karimnagar; Nandyal;  
Warangal; Kurnool; Nizamabad

**Karnataka:** Tumkur; Mandya;  
Mysore

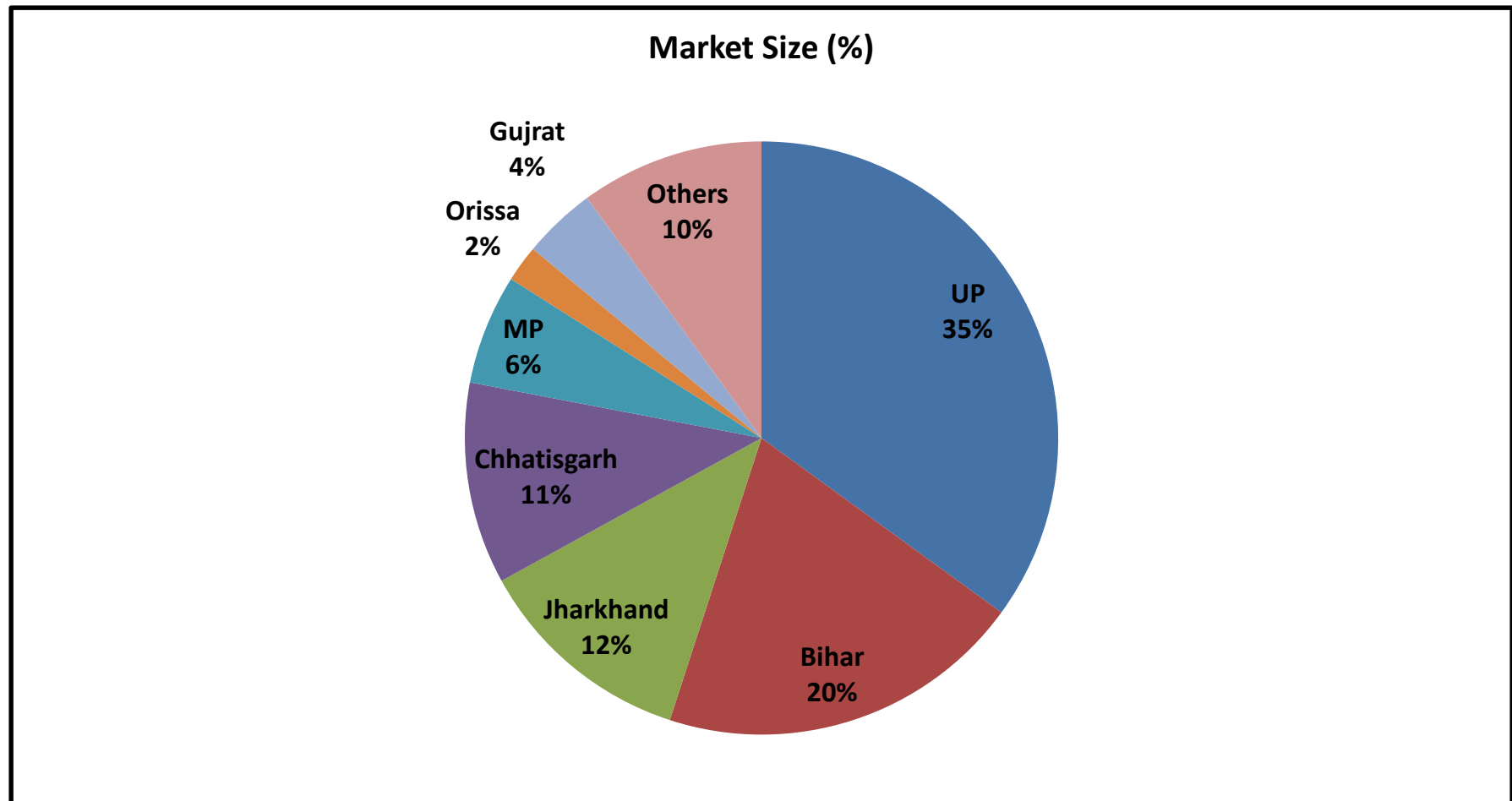
**Andhra Pradesh : 80%**

**Karnataka: 20%**

# Seed Production Challenges

- Obtaining higher seed yield to reduce seed cost for farmers
- Identifying newer seed production areas
- Specified seed production zones (SPZ) with strengthened infrastructure

# Hybrid Rice Market Size (2012-13)



Hybrid Rice market growth 3X in last five years

# Hybrid Rice Seed Markets

- **National:**
  - ❖ **Eastern India** : under National Food Security Mission & '*Bringing Green Revolution to Eastern India*'
  - ❖ **North India**: For areas with poor soil and deficit water situations
- **International**: Vietnam; Philippines; Indonesia; Bangladesh; Thailand; etc.



The basket will surely overflow with sustained efforts

Thank You

**Acknowledgement:** Rajvir Rathi; Paresh Verma;  
Jaganmohan Rao; Arun Mittal;  
SVR Rao; Yogeshwar Rao;  
B C Viraktamath;