

# OUTLOOK FOR ORGANIC P RECYCLING AND LONG-TERM P FERTILISER DEMAND IN INDIA

Satish Chander  
Director General  
The Fertiliser Association of India  
New Delhi

## FERTILITY STATUS OF INDIAN SOILS

- Deficiency of at least 6 nutrients (N, P, K, S, Zn & B) is quite widespread in Indian soils.
- Increasing deficiency of secondary and micronutrient have started limiting crop response to NPK application

Nutrient	% deficient samples
Nitrogen	89
Phosphorous	80
Potassium	50
Sulphur	40
Zinc	48
Boron	33
Iron	12
Manganese	5



## INTER-ZONE VARIATION IN PHOSPHORUS USE – 2009-10

Zone	P use per hectare (Kg)
East	30.2
North	45.3
South	52.7
West	31.9
All-India	38.3

## CONTRIBUTION OF PHOSPHOROUS THROUGH ORGANIC SOURCES – 2007-08

Items	Million tonnes P <sub>2</sub> O <sub>5</sub>
Farmyard manure	0.93
Compost (rural and urban)	0.92
Crop residues	0.015
Vermi compost	0.023
Other manures	0.069
Total	1.96

## CONTRIBUTION OF P THROUGH OTHER SOURCES

- Bone meal
- Fish meal
- Oil cake
- Tank silt

## CONTRIBUTION OF P THROUGH BIO FERTILISERS

- Phosphate Solubilising Bacteria (PSB)
- Mycorrhiza

## TRENDS IN PRODUCTION AND DESPATCHES OF PSB

Year	Production (in tonnes)	Despatches (in tonnes)
2001-02	4502	3742
2002-03	3259	2887
2003-04	4005	3574
2004-05	5918	5575
2005-06	6076	5963
2006-07	6920	6847

## FUTURE DEMAND OF PHOSPHOROUS IN INDIA

Year	Demand for P fertiliser (million tonnes P)
2009-10	7.3
2020-21	12.0
2030-31	14.0

In addition, P nutrient would be available from other sources, such as farmyard manure, compost (rural and urban), crop residues, vermin compost, PSB and other sources. Current use of P through these sources is about 1.96 million tonnes.

## CONCLUSION

- Deficiency of phosphorous in India is low to medium
- P fertiliser use has grown considerably over the years
- Phosphorous fixation is high, solubalisation of phosphorous is essential
- Organic sources enhances fertiliser use efficiency
- Full potential of organic sources needed to be tapped
- Organic sources can supplement nutrients in the soil but cannot substitute chemical fertilisers.