

Technology 4: Integrated Nutrient Management (INM) for Pulses

Since time immemorial, pulses and oilseeds have been cultivated on marginal and sub-marginal lands, which are characterized by poor soil fertility and moisture stress, and consequently their yield potentials have not been realized. Further, more than 90 per cent area under pulses and more than 75 per cent area under oilseed are rain fed. Therefore, there is a great scope of increasing the production in rain fed areas through nutrient management.

- On-farm trials on INM for pulses (chickpea and lentil) conducted at 60 farmers' fields in Raisen, Bhopal, Rewa and Satna districts of Madhya Pradesh not only resulted in higher yields but also saved fertilizer cost.
- Application of 75% NPK + 25t FYM + seed inoculation through Rhizobium + soil application of 3 kg PSB ha⁻¹ to the soybean during kharif season and 50-75% of the recommended NPK dose to rabi crop (chickpea/lentil) (based on residual moisture availability) harvested 12-25% more chickpea and 15-28% more lentil as compared to traditional practice (Table 5.1).

Table 5.1: Yield advantage of pulse crops due to improved nutrient management and moisture conservation over farmer's practice in some selected districts of Madhya Pradesh.

Treatment	Bhopal & Raisen		Rewa & Satna	
	Chickpea	Lentil	Chickpea	Lentil
Integrated Nutrient Management	1.3(13.5)	1.1(20.7)	3.3 (31.0)	1.3(28.3)
Integrated Nutrient Management+ Moisture Conservation	2.4(25.0)	1.3(28.3)	4.6(42.7)	

Data in parenthesis are % increase in seed yield.

The average profit to the farmers with improved nutrient and soil moisture management practices from three cropping systems is given below:

Economic gains* (Rs.ha ⁻¹ Yr ⁻¹)		
Soybean-chickpea	Soybean-lentil	Paddy-chickpea
4000-14000	2500-7500	10000-15000

*Average of 150 On-Farm tested for three years (2001-03) in five districts