

2009 IPNI Science Award to Dr. J.K. Ladha

The International Plant Nutrition Institute (IPNI) named Dr. J.K. Ladha of the International Rice Research Institute (IRRI) as the winner of the 2009 IPNI Science Award. Dr. Ladha is a senior soil scientist, the coordinator of the Rice-Wheat Consortium in Asia, and representative of IRRI-India. He receives a special plaque plus a monetary award of US\$5,000.00 (five thousand dollars).

“Dr. Ladha is a truly outstanding scientist and most deserving of this recognition due to the scope and breadth of his research, training, and extension activities,” said Dr. Terry L. Roberts, President of IPNI. “He has made immense contributions to international agriculture through his activities in several Asia countries, on problems across national and regional boundaries.”

Born in Gwalior, India, Dr. Ladha earned his Ph.D. in Botany from Banaras Hindu University in 1976. Earlier, he earned his B.Sc. in Biological Sciences in 1971 and his M.Sc. in Botany in 1975 at Jiwaji University in India. He has devoted nearly 30 years of his career to working in the area of integrated resources management with strong emphasis on soil fertility and nutrient management for achieving increased crop yields.

Dr. Ladha’s work, in collaboration with many national partners, takes a holistic, systems approach covering various components of agronomic, soil, and water management. He em-

phasizes farmer-participatory approaches for developing innovative resource-use-efficient alternatives of tillage/crop establishment and fertilizer management strategies.

Dr. Ladha has published extensively in leading peer-reviewed journals and edited several books. He has authored or co-authored 183 research articles in international research journals, 60 articles in proceedings and other books, and has edited or co-edited 11 books.



Dr. J.K. Ladha

The IPNI Science Award is intended to recognize outstanding achievements in research, extension, or education, with focus on efficient and effective management of plant nutrients and their positive interaction in fully integrated crop production that enhances yield potential and crop quality. Private or public sector agronomists, soil scientists, and crop scientists from all countries are eligible for nomination. The previous recipients of the IPNI Science Award were Dr. John Ryan of ICARDA in 2008 and Dr. M.S. Aulakh of India in 2007.

More information and nomination forms for the 2010 IPNI Science Award are available from the headquarters or regional offices of the organization, or from the website: www.ipni.net/awards.

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Table 2. Effect of K application on uptake (kg/ha) in selected rabi crops.

| Crop | Portion | K ₂ O applied, kg/ha | | | | | CD (p=0.05) |
|---------|---------|---------------------------------|-----------------|-----------------|-----------------|-----------------|------------------|
| | | 0 | 30 | 60 | 90 | 120 | |
| Wheat | Grain | 20.2 (0.56) | 22.3 (0.59) | 27.0 (0.66) | 33.9 (0.75) | 35.2 (0.78) | 2.91 (0.021) |
| | Straw | 94.7 (1.74) | 100.1 (1.79) | 113.7 (1.87) | 130.1 (1.99) | 134.0 (2.04) | 10.27 (0.026) |
| Oat | Grain | 9.3 (0.51) | 11.4 (0.57) | 13.9 (0.64) | 16.1 (0.69) | 17.3 (0.71) | 1.57 (0.038) |
| | Straw | 46.3 (1.68) | 51.6 (1.73) | 58.2 (1.79) | 64.2 (1.86) | 67.1 (1.89) | 4.81 (0.021) |
| Mustard | Seed | 10.1 (0.67) | 11.9 (0.73) | 14.8 (0.79) | 18.8 (0.87) | 20.6 (0.92) | 1.70 (0.019) |
| | Stover | 71.8 (1.96) | 82.6 (2.05) | 95.9 (2.14) | 112.8 (2.24) | 119.5 (2.28) | 13.36 (0.030) |

Data in parentheses indicate mean content (%) of K.

Table 3. Effect of K application on K use efficiency and apparent recovery in selected rabi crops.

| Crop | K ₂ O applied, kg/ha | | | |
|--|---------------------------------|------|------|------|
| | 30 | 60 | 90 | 120 |
| ----- K use efficiency (kg produce /kg K ₂ O) ----- | | | | |
| Wheat | 4.6 | 7.9 | 9.7 | 7.4 |
| Oat | 5.5 | 6.0 | 5.6 | 4.9 |
| Mustard | 5.2 | 6.3 | 7.5 | 6.3 |
| ----- Percent apparent recovery, % ----- | | | | |
| Wheat | 6.8 | 11.2 | 15.1 | 12.5 |
| Oat | 7.1 | 7.7 | 7.5 | 6.6 |
| Mustard | 6.5 | 8.0 | 9.8 | 8.8 |

References

- Meel, P.K., S.C. Mehta, K.S. Grewal, and M. Singh. 1994. *Journal of Potassium Research* 10(4): 342-397.
- Mishra, S.K. 2003. *Journal of the Indian Society of Soil Science*. 51 (4): 544-548.
- Tiwari, K.N. and V. Nigam. 1985. *Journal of Potassium Research* 1: 62-71.
- Surekha, K., Narayana M. Reddy, and V. Balasubramanian. 2003. *Journal of Potassium Research*. 19: 55-60.
- Singh, R.N. and R.K. Pathak. 2002. *Journal of the Indian Society of Soil Science* 50 (2): 181-185.
- Singh, Vinay and Ravendra Singh. 2002. *Journal of Potassium Research*. 18: 109-111.
- Chaudhary, S.K. and H.K. Roy. 1992. *Journal of the Indian Society of Soil Science*. 40: 468-470.

Chaudhary and Roy (1992) and Surekha et al. (2003).

Apparent recovery (%) of K was influenced by K levels with the maximum recovery occurring at 90 kg K₂O/ha, with the exception of oat where a maximum apparent recovery of 7.7% was noted at 60 kg K₂O/ha (**Table 3**). The ranges of apparent K recovery for these crops results in a ranking which is identical to that for K uptake, wherein wheat > mustard > oat. IC INDIA

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