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Orissa University of Agriculture & Technology (OUAT)  
Department of Soil Science & Agricultural Chemistry  
College of Agriculture, Orissa University of Agriculture & Technology, Bhubaneswar – 751 003

Co-sponsored by: Bangladesh Fertilizer Association (BFA), Fertilizer Association of India (FAI), Indian Council of Agricultural Research (ICAR) and Pakistan Agricultural Research Council (PARC)

***Potassium Role and Benefits in Improving Nutrient Management for Food Production and Reduced Environmental Damages***

***List of papers DRAFT***

2 July 2009

**Technical session 1: Nutrient management to meet challenges of food security**

Food security - India scenario

*J.S. Samra, National Rainfed Area Authority, and P.D. Sharma, Indian Council of Agricultural Research, New Delhi*

Global impacts of human malnutrition with mineral nutrients

*A.J. Stein, University of Hohenheim, Stuttgart, Germany*

Climatic changes and mineral nutrition of crop plants

*S. St. Clair, Brigham Young University, Provo, Utah, USA*

Implications of soil fertility to meet future demand: The Indian scenario

*J.C. Katyal, CCS Agricultural University, Hisar, and Subba Rao, Indian Institute of Soil Science, Bhopal*

Particular issues in plant production under acid soils: The Orissa scenario

*N. Panda, Western Orissa Development Council, Bhubaneswar*

**Technical session 2: Nutrient use efficiency and Potassium**

Phosphorus acquisition efficiency: Root morphology and physiology

*H. Lambers, University of Western Australia, Perth, Australia*

Potassium nutrition in crops under variable nitrogen regime

*F. Zhang, China Agricultural University, Beijing, China*

Effect of K on N uses efficiency – India scenario

*K.N. Tiwari, Formerly International Plant Nutrition Institute, Gurgaon, and B.S. Dwivedi, Indian Agricultural Research Institute, New Delhi*

### **Technical session 3: Role of potassium and mineral nutrition in alleviation of stress**

Mineral nutrition in drought stressed plants

*Z. Rengel, University of Western Australia, Perth, Australia*

Mineral nutrition of crop plants in salt affected areas in India

*A.K. Singh, Indian Council of Agricultural Research, New Delhi*

K and water stress in dryland agriculture

*Ch. Srinivasarao, K.P.S. Vittal, and B. Venkateswarlu, Central Research Institute for Dryland Areas, Hyderabad*

Amelioration effect of potassium on iron toxicity in soils of Orissa

*G. N. Mitra, and S.K. Sahu, Orissa University of Agriculture & Technology, Bhubaneswar*

Potassium nutrition and plant's pests

*M. Assaraf, International Potash Institute, India*

### **Technical session 4: Production and quality of agricultural products and impacts on the environment and humans**

Role of potassium and magnesium in carbon allocation and biomass production:

Implications for biofuel crops

*I. Cakmak, Sabanci University, Istanbul, Turkey*

Role of nutrient management in reduction of green- house gasses (GHG). *C. Snyder,*

*International Plant Nutrition Institute, Conway, Arkansas, and A. Johnston, Asia & Oceania Group, IPNI, Canada.*

Nutrient management in forests and its environmental impact

Nutrients and human nutrition – the Indian scenario

*K. Bhaskarachary, National Institute of Nutrition, Hyderabad*

Impact of potassium nutrition on post-harvest quality: Melon case study

*G.E. Lester, USDA ARS, Weslaco, USA*

### **Technical session 5: Spatial variability of soil properties and Site Specific Nutrient Management (SSNM)**

Implementing site-specific potassium nutrition in rice based cropping systems

*R.J. Buresh, IRRI, Manila, Philippines*

Site specific potassium management in rice based cropping systems in India

*S.K. Sanyal, BCKV University, Mohanpur, and M.S. Gill, Project Directorate of Cropping Systems Research, Modipuram*

GIS based fertility mapping for SSNM at village level in China

*J. Jin and P. He, International Plant Nutrition Institute, Beijing, China*

Potassium management for crops in soils of Orissa

*D. Jena, and A.K. Pal, Orissa University of Agriculture & Technology, Bhubaneswar*

### **Technical session 6: Nutrient mining and input output balances**

Potassium dynamics in soil under different cropping systems and nutrient management practices

*I. Öborn, Swedish University of Agricultural Sciences, Uppsala, Sweden*

State-wise approach to crop nutrient balances in India  
*T. Satyanarayana, International Plant Nutrition Institute, Hyderabad, and R.K. Tewatia, Fertilizer Association of India, New Delhi*

Analysis of productivity, PFP and soil fertility in relation to nutrient management in the Indo-Gangatic plains  
*S.K. Bansal, Potash Research Institute of India, Gurgaon, and H. Singh, International Plant Nutrition Institute, Pune*

Soil tests, fertilizer recommendation and nutrient balance in the Punjab, India: do they match?  
*M.S. Brar, Punjab Agriculture University, Ludhiana*

Challenges for nutrient management in Bangladesh  
*M.S. Islam, Bangladesh Fertilizer Association, Dhaka, Bangladesh*

Increasing productivity of crops in Pakistan with judicious use of potash  
*Z. Ahmed, ENGRO Chemicals & Fertilizers, Lahore, Pakistan*

Challenges of nutrient management in rice-maize cropping systems in South Asia  
*J. Timsina, IRRI-Bangladesh, Dhaka, Bangladesh, K. Majumdar, International Plant Nutrition Institute, Gurgaon, India, and L. Jat, Directorate of Maize Research, ICAR, India*

#### **Technical session 7: The role of extension in increasing agricultural productivity**

Innovative extension approach and strategies for improving agricultural productivity in the Philippines  
*J. Binamira, National IPM, Department of Agriculture, Quezon City, Philippines*

Role of industry initiatives in extension work in India  
*G. Ravi Prasad, Coromandel Fertilizers, Secunderabad*

#### **Conclusions**

Large scale dissemination in South Asia: the CSISA initiative and its potential impact on the region's agricultural productivity (TBD)

Future needs and prospects for research on potassium  
*V. Römheld, Hohenheim University, Stuttgart, Germany*

Panel discussion and recommendations

Poster award ceremony

D. Jena, *Organizing Secretary* [dinabandhu\\_jena@yahoo.com](mailto:dinabandhu_jena@yahoo.com)

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