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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

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