

# Journal of Agricultural Physics

Volume 14

Number 2

December 2014

## CONTENTS

### Research Articles

1. Conservation Tillage Effects on Soil Physical Properties, Organic Carbon Concentration and Productivity of Soybean-Wheat Cropping System. K.M. HATI, R.K. SINGH, K.G. MANDAL, K.K. BANDYOPADHYAY, J. SOMASUNDARAM, M. MOHANTY, N.K. SINHA, R.S. CHAUDHARY AND A.K. BISWAS ... 121
2. Parameterization and Fitting Performance of Soil Water Retention Functions using Non-linear Least-Squares Optimization for Aeolian Soils. ALKA RAVESH AND R.K. MALIK ... 130
3. Simulating the Effects of Elevated Temperature and CO<sub>2</sub> on Growth and Productivity of Winter Maize. GOURANGA KAR AND ASHWANI KUMAR ...137
4. Evaluation of Irrigation Application for Two *Rabi* Crops Grown in Coastal West Bengal Using Agrometeorology and Remote Sensing. SHISHIR RAUT, B. MAJI AND S.K. SARANGI ...143
5. Crop Weather Relationship and Cane Yield Prediction of Sugarcane in Bihar. ABDUS SATTAR, S.A. KHAN AND MANISH KUMAR ...150
6. Response of Sulphur and FYM on Soil Physico-Chemical Properties and Growth, Yield and Quality of Mustard (*Brassica Nigra L.*). Md. SARWARE ALAM, A.K. MISHRA, KAILASH SINGH, SUNIL KUMAR SINGH AND ARUN DAVID ...156
7. Food-Water-Energy Nexus in Arid Region: An Analysis from Jaisalmer District of Western Rajasthan. PRIYABRATA SANTRA, R.N. KUMAWAT, N.D. INAKHIYA, T.K. BHATI, M.M. ROY, D. MISHRA AND R.K. BHATT ...161
8. Elevated CO<sub>2</sub> Promotes Plant Scenscence in *kabuli* Chickpea – A Ground-based Remote Sensing Study. SAURAV SAHA, VINAY K. SEHGAL AND MADAN PAL ...167
9. Soil Hydro-thermal Environment vis-à-vis Plant Growth of Wheat under Varying Tillage and Residue Management. SURAJIT MANDAL, D. CHAKRABORTY, R.K. TOMAR, R.N. GARG, SHEORAJ SINGH AND U.K. BEHERA ...172
10. Effect of Microenvironment under Different Colour Shade Nets on Biophysical Parameters and Radiation Use Efficiency in Spinach (*Spinacia oleracea*). REKHA KUMARI MEENA AND ANANTA VASHISTH ...181
11. Development of Multi Stage District Level Wheat Yield Forecast Models. AMIT K. SINGH, ANANTA VASHISTH, V.K. SEHGAL, A. GOYAL, H. PATHAK AND S.S. PARIHAR ...189
12. Immediate and Residual Effect of Chiselling on Soil Hydro-Mechanical Behaviour and Root Growth in a Soybean-Wheat Rotation. MUKHTAR AHMED, PRAMILA AGGARWAL, DEBASHIS CHAKRABORTY, SHEORAJ SINGH AND R.N. GARG ...194

13. Land Use / Land Cover Mapping Using High Resolution Mutlispectral Satellite Data. ...201  
PRACHI MISRA SAHOO, RABI NARAYAN SAHOO, DEVINA PANDYA  
AND S. SARAN

**Short Communications**

14. Leaf Area Index and Sunlit Leaf Area Index and their Impacts on Leaf Dry Matter ...208  
Accumulation in Rice (*Oryza Sativa* L.) under Different Dates of Planting. P.K.  
CHAKRABORTY, S. BASU, S.K. DUTTA, D. FANGZAUVA, S. JENA AND R.  
NATH
15. Organic Carbon, Bulk Density and Aggregate Stability of a Vertisol as Affected by ...213  
Varying Plantations / Vegetation Covers in South Gujarat. AMARESH DAS AND  
MD. ZUBER ANSARI

*Guidelines to the Authors for Submission of Manuscript*