

ISSN 0973-032X

# JOURNAL OF AGRICULTURAL PHYSICS

---

Volume 12

Number 1

June 2012

---



**The Indian Society of Agrophysics**

Division of Agricultural Physics  
Indian Agricultural Research Institute

New Delhi - 110 012

<http://www.agrophysics.in>

# Journal of Agricultural Physics

Volume 12

Number 1

June 2012

## CONTENTS

### Review Article

1. Impact of Tropospheric Ozone on Agroecosystem: An Assessment. SANGEETA LENKA AND N.K. LENKA ... 1

### Research Articles

2. Trend Analysis of Long Term Weather Variables in Mid Altitude Meghalaya, North-East India. B.U. CHOUDHURY, ANUP DAS, S.V. NGACHAN, A. SLONG, L.J. BORDOLOI AND P. CHOWDHURY ... 12
3. Rainfall Characteristics Analysis for Jute based Cropping System at Barrackpore, West Bengal, India. D. BARMAN, A.R. SAHA, D.K. KUNDU AND B.S. MAHAPATRA ...23
4. Mapping of Degraded Lands Using Remote Sensing and GIS Techniques. G.S. TAGORE, G.D. BAIRAGI, N.K. SHARMA, R. SHARMA, S. BHELAWA AND P.K. VERMA ...29
5. Effect of Direction of Sowing and Crop Phenotype on Radiation Interception, Use Efficiency, Growth and Productivity of Mustard (*Brassica juncea* L.). SOMNATH JHA, V.K. SEHGAL AND Y.V. SUBBARAO ...37
6. Yield and Water Use Efficiency of Oilseed *Brassica* Species as Influenced by Irrigation Levels under Normal and Late Sown Conditions in Central Punjab. P.K. KINGRA AND PRABHJYOT-KAUR ...44
7. Effect of Dates of Sowing on Thermal Utilisation and Heat Use Efficiency of Groundnut Cultivars in Central Punjab. P.K. KINGRA AND PRABHJYOT-KAUR ...54
8. Vertical Distribution of Physico-Chemical Properties under Different Topo-sequence in Soils of Jharkhand. RAKESH KUMAR, RAKESH KUMAR, KISHAN SINGH RAWAT AND BRIJESH YADAV ...63
9. Effect of Planting Geometry on Microclimate, Growth and Yield of Mungbean (*Vigna radiata* L.). SOM PAL SINGH, S.K. SANDHU, L.K. DHALIWAL AND INDERJEET SINGH ...70
10. Effect of Agronomic Practices on Growth, Grain Yield, Malt Yield Losses of Barley (*Hordeum vulgare* L.). JASVINDER SINGH, S.S. MAHAL AND S.S. MANHAS ...74
11. Impact of Nitrogen, Phosphorus, Potash and Sulphur on Productivity of Rice-Wheat System in Sub-humid Region. RAJENDRA KUMAR, V.K. SINGH, R.P. SHARMA, ANIL KUMAR AND GYAN SINGH ...84

*Guidelines to the Authors for Submitting Manuscript* ...89

*Membership Application Form*