

ISSN 0971-2836

# JOURNAL OF SOILS & CROPS

VOL. 29 No.1 June 2019



ASCERS

**ASSOCIATION OF SOILS AND  
CROPS RESEARCH SCIENTISTS  
NAGPUR (M.S.) INDIA**

# JOURNAL OF SOILS AND CROPS

**CAB International abstracted and  
NAAS rated (4.46) Journal  
Scientific Journal Impact Factor (SJIF 2018) 6.736  
UGC Listed Journal (J. No. 20506)**

**Visit at :** [www.ascrsnagpur.com](http://www.ascrsnagpur.com) / [www.journalofsoilsandcrops.com](http://www.journalofsoilsandcrops.com)

**E-mail :** [info@ascrsnagpur.com](mailto:info@ascrsnagpur.com) / [info@journalofsoilsandcrops.com](mailto:info@journalofsoilsandcrops.com)

(Six Monthly Research Journal Registered with the Registrar of Newspapers of India  
No. 042515 / 30 / AU / TC / 91)

## FOUNDER MEMBERS

Dr. D.R. Kene	Prof. D.B. Matte	Dr. R. D. Deotale	Dr. K.S. Yawalkar
Dr. N.N. Khune	Dr. G.N. Bobde	Dr. K.K. Thakare	Prof. Y.D. Deotale
Prof. N.V. Sorte	Prof. U.R. Vishwakarma		

## EXECUTIVE COUNCIL

President :	Dr. D. R. Kene	Joint Secretary :	Dr. K. K. Thakare
Vice-President:	Prof. D. B. Matte	Executive Members :	Dr. N. N. Khune
Secretary :	Dr. R. D. Deotale		Prof. N.V. Sorte
			Prof. Y.D. Deotale

## ADVISORY BOARD

Dr. K. S. Yawalkar (Ex. Prof., IARI, New Delhi)

## EDITORIAL BOARD

**Editor-in-Chief :** Dr. R.D. Deotale  
**Associate Editors :** Dr. H.B. Baldalad (UAS, Dharwad), Dr. Akshay Talukdar ICAR-IARI, New Delhi), Dr. A.K. Srivastava (NRCC, Nagpur), Dr. A.K. Singh (Medziphema, Nagaland), Dr. Shanti R. Patil (A.C., Nagpur), Dr. (Mrs.) Suman Bala Singh (CICR, Nagpur), Dr. Ashish P. Lambat (SMM, Nagpur), Dr. Shamrao Jahagirdar (UAS, Dharwad), Dr. V.K. Kharche (PDKV, Akola), Dr. P.S. Burange (PAU, Ludhiana), Dr. Jagdish Prasad (NBSS & LUP, Nagpur), Dr. B. B. Ghaley (University of Copenhagen, Denmark), Dr. Shreedhar Gadge (Biochemistry & Cell Biology & the Reddick Centre for Computational Biology, Edinburg Uni. Edinburg)

---

---

Published by : Association of Soils and Crops Research Scientists  
21, Anand Nagar, Atrey Lay-out, Near Datta Meghe  
College, Pratap Nagar, Post Office Nagpur - 440022.  
(M.S.) India. Tel.: 0712-2235023 / Mob. : 9370905008

Composed by : Neha Advertising Agency, C-5 Neelkamal Aprt., Bajaj Nagar,  
Nagpur-10

Printed at : Sukhkarta Printers, 62, Bajaj Nagar, Nagpur.

Copyright @ by : J. Soils and Crops (No. 042515 / 30 / AU / TC / 91).

# Journal of Soils and Crops

Volume 29

Number 1

June 2019

## C O N T E N T S

<b>Evapotranspiration interval for proper irrigation scheduling in Egypt</b> T. Noreldin <sup>1</sup> and E. Kasem <sup>2</sup>	1-12
<b>Response of onion productivity to deficit irrigation in calcareous soil</b> A.M. Taha <sup>1</sup> , E. Yasso <sup>2</sup> and M.A. Sayed <sup>3</sup>	13-22
<b>Nitrogen fertilizer effect on basil and water productivity under new reclaimed soils conditions</b> Alia Amer <sup>1</sup> , Mona Abdallah <sup>2</sup> , Tahany Noreldin <sup>3</sup> and Mohamed Freag Mohamed <sup>4</sup>	23-31
<b>Respodip treatment with nano emulsion of hexanal to reduce the anthracnose disease of banana and extend its shelf-life</b> I. Arumuka Pravin <sup>1</sup> , S. Srivignesh <sup>2</sup> , D. Durgadevi <sup>3</sup> , K.S. Subramanian <sup>4</sup> and A.S. Krishnamoorthy <sup>5</sup>	32-37
<b>Isolation and molecular characterization of <i>xanthomonas euvesicatoria</i> causing bacterial leaf spot of tomato in Tamil Nadu</b> Sneha R. Patil <sup>1</sup> and V. Paranidharan <sup>2</sup>	38-43
<b>Effect of nutrient management on soil nutrient availability at critical growth stages of rice in black soils of Kerala</b> Danish Tamuly <sup>1</sup> , and Betty Bastin	44-51
<b>Temporal dynamics of nitrogen acquisition in maize cultivars grown under organic -N supply</b> P. Mandale <sup>1</sup> , B.L. Lakaria <sup>2</sup> , S.B. Aher <sup>3</sup> , A.B. Singh <sup>4</sup> and S.C. Gupta <sup>5</sup>	52-57
<b>Effect of pressmud based biocompost on yield and quality of sunflower</b> T. Jyolsna <sup>1</sup> and S.K. Gali <sup>2</sup>	58-62
<b>Effect of different organics and inorganics on available nutrients of soil in a vertisol under maize (<i>Zea mays</i> L.) crop</b> Deepa Kalappanavar <sup>1</sup> and S. K. Gali <sup>2</sup>	63-67
<b>Studies of some soil health parameters of district Bareilly, U.P. (India)</b> Rajeev Kumar Yadav <sup>1</sup> and Nisha Verma <sup>2</sup>	68-73
<b>Stability of newly developed genotypes in <i>kharif</i> sorghum (<i>Sorghum bicolor</i> (L.) Moench)</b> S.K. Jain <sup>1</sup> and P.R. Patel <sup>2</sup>	74-77
<b>Effect of organic amendments and inorganic fertilizers on the properties of Theri soil</b> M. Arun Raj <sup>1</sup> and D. Vasanthi <sup>2</sup>	78-82
<b>Performance of Asiatic <i>lilium</i> hybrid for vegetative growth and bublet formation during scale propagation</b> G.P. Panda <sup>1</sup> and C. R. Mohanty <sup>2</sup>	83-85
<b>Correlation coefficient of Zn fraction with various soil fertility parameters by long term application of inorganic fertilizers and farmyard manure in vertisol</b> Sunil <sup>1</sup> Panwar, A.K. Dwivedi <sup>2</sup> , Anshita Gupta <sup>3</sup> , and B.S. Dwivedi <sup>4</sup>	86-91
<b>Effect of vermicompost on nutritional status of some leafy vegetables</b> B. Kamatchi Kala <sup>1</sup> and N. NagaJothi <sup>2</sup>	92-96
<b>Effect of long-term application of fertilizers and manure on soil properties</b> A. Khandagale <sup>1</sup> , B.S. Dwivedi <sup>2</sup> , S.B. Aher <sup>3</sup> , A.K. Dwivedi <sup>4</sup> , D.S. Yashona <sup>5</sup> and D. Jat <sup>6</sup>	97-104
<b>Effect of foliar application of humic acid through vermicompost wash and NAA on morpho-physiological parameters and yield of sesamum</b> V.A. Guddhe <sup>1</sup> , R.D. Deotale <sup>2</sup> , S.B. Korade <sup>3</sup> , O.G. Thakare <sup>4</sup> , A.P. Dhongade <sup>5</sup> and N.D. Jadhav <sup>6</sup>	105-111

<b>Feeding practices followed by crossbred cattle owners in Seloo tahsil of Wardha district</b> N.P. Kadam <sup>1</sup> , A. B. Motghare <sup>2</sup> , A.A. Bhondve <sup>3</sup> and S.B. Bhalerao <sup>4</sup>	<b>112-116</b>
<b>Studies on body measurement and productive performance of goat in Sadak Arjuni tahsil of Gondia district</b> Jyoti Bansod <sup>1</sup> , V. G. Atkare <sup>2</sup> and Aachal Shambharkar <sup>3</sup>	<b>117-120</b>
<b>Effect of seed rate and spacing on grain yield of rice under aerobic situation (<i>Oryza sativa</i> L.)</b> K. V. Sanap <sup>1</sup> , N. D. Parlawar <sup>2</sup> , P. T. Gaidhane <sup>3</sup> and A. R. Jadhao <sup>4</sup>	<b>121-125</b>
<b>Generation mean analysis in maize (<i>Zea mays</i> L.)</b> P. Z. Rahangdale <sup>1</sup> , S.R. Kamdi <sup>2</sup> , S.R. Patil <sup>3</sup> , R. D. Deotale <sup>4</sup> , M. B. Pandit <sup>5</sup> , D. Y. Upadhyay <sup>6</sup> and G. A. Kankal <sup>7</sup>	<b>126-130</b>
<b>Foliar application of chitosan and IBA improved morpho-physiological attributes and yield in pigeonpea</b> Om G. Thakare <sup>1</sup> , Rajesh D. Deotale <sup>2</sup> , Ashish P. Dhongade <sup>3</sup> , Vaibhav A. Guddhe <sup>4</sup> , Nilesh D. Jadhav <sup>5</sup> and Satyajit B. Korade <sup>6</sup>	<b>131-135</b>
<b>Effect of sulphur on growth, yield and quality parameters of linseed (<i>Linum usitatissimum</i> L.)</b> S. P. Bainade <sup>1</sup> , N.D. Parlawar <sup>2</sup> , S. B. Korade <sup>3</sup> and V. S. Hivare <sup>4</sup>	<b>136-139</b>
<b>Assessment of M<sub>4</sub> Indian mustard mutants for morpho-physiological variability and yield attributes</b> Ashish P. Dhongade <sup>1</sup> , R. D. Deotale <sup>2</sup> , Beena Nair <sup>3</sup> , N.D. Jadhav <sup>4</sup> and V. A. Guddhe <sup>5</sup>	<b>140-145</b>
<b>Performance of double cross hybrids in maize (<i>Zea mays</i> L.)</b> M. B. Pandit <sup>1</sup> , S. U. Charjan <sup>2</sup> , S. R. Kamdi <sup>3</sup> , S. R. Patil <sup>4</sup> , P. Z. Rahangdale <sup>5</sup> , M. K. Moon <sup>6</sup> and D. Y. Upadhyay <sup>7</sup>	<b>146-151</b>
<b>Estimation of genetic parameters in F<sub>2</sub> population of lathyrus (<i>Lathyrus sativus</i> L.)</b> A. V. Navghare <sup>1</sup> , V. S. Jayade <sup>2</sup> , Vandana S. Madke <sup>3</sup> , D. Y. Upadhyay <sup>4</sup> , S. A. Patil <sup>5</sup> , G. A. Kankal <sup>6</sup> and P. Z. Rahangdale <sup>7</sup>	<b>152-157</b>
<b>Combining ability analysis in linseed</b> D. Y. Upadhyay <sup>1</sup> , P. R. Manapure <sup>2</sup> , A. V. Anasane <sup>3</sup> , A. V. Navghare <sup>4</sup> , G. A. Kankal <sup>5</sup> and P. Z. Rahangdale <sup>6</sup>	<b>158-163</b>
<b>Assessment of variability in M<sub>3</sub> generation of Indian mustard (<i>Brassica juncea</i>) czern and coss</b> Anup Anasane <sup>1</sup> , Beena Nair <sup>2</sup> , A. P. Dhongade <sup>3</sup> and D. Y. Upadhyay <sup>4</sup>	<b>164-169</b>
<b>Utilization of Khamang rice (<i>Oryza sativa</i>) for the preparation of kheer</b> S. N. Chavhan <sup>1</sup> , V. G. Atkare <sup>2</sup> and Kavita Kadu <sup>3</sup>	<b>170-175</b>
<b>Efficacy of cow urine and NAA on chemical, biochemical and yield and yield contributing parameters of wheat</b> R. D. Deotale <sup>1</sup> , S. B. Korade <sup>2</sup> , V. A. Guddhe <sup>3</sup> , N. D. Jadhav <sup>4</sup> and O. G. Thakare <sup>5</sup>	<b>176-180</b>
<b>Studies on variation in biometrical traits in C<sub>2</sub> generatin of African marigold</b> Shubhangi K. Maraskole <sup>1</sup> , Shanti R. Patil <sup>2</sup> , G. A. Kankal <sup>3</sup> , Arati D. Rathod <sup>4</sup> and Vandana B. Kalamkar <sup>5</sup>	<b>183-188</b>
<b>Influence of putrescine and IBA on morpho-physiological parameters and yield of black gram</b> Nilesh D. Jadhav <sup>1</sup> , R. D. Deotale <sup>2</sup> , S. B. Korade <sup>3</sup> , A. P. Dhongade <sup>4</sup> , O. G. Thakre <sup>5</sup> , V. A. Guddhe <sup>6</sup>	<b>189-193</b>
<b>Effect of weed management on growth, yield and economics of soybean</b> S. M. Deshkari <sup>1</sup> , P. C. Pagar <sup>2</sup> , S. T. Dangore <sup>3</sup> , V.P. Babhulkar <sup>4</sup> and H. S. Mendhe <sup>5</sup>	<b>194-199</b>
<b>Response of safflower (<i>Carthmus tinctorius</i> L.) cultivars to sowing windows in vertisols</b> N. R. Mendhekar <sup>1</sup> , D. J. Jiotode <sup>2</sup> , V. S. Khawale <sup>3</sup> and N. D. Parlawar <sup>4</sup>	<b>200-206</b>



## GUIDELINES FOR AUTHORS

- 1} Authors should submit two copies of manuscript. Manuscript should be typed with 2.0 spacing on one side of the bond paper measuring 22 x 28 cm with a margin of 5 cm on the left side and 3 cm on three other sides.
- 2} Communications-Research articles/notes should be to the point, concise and clear with short introduction. The title of the article should be in capital letters
- 3} The text of the paper should be arranged into suitable headings - Abstract, Keywords, Introduction, Materials and Methods, Results and Discussion followed by References.
- 4} The manuscript should be more informative including tables, graphs and figures.
- 5} Abbreviations of the periodicals should conform to those given in the world list of the scientific periodicals.
- 6} Diagrams and photographs must be submitted in original and they should be properly labelled.
- 7} Tables should be typed separately from the text and the head lines of the same should be short and clear.
- 8} References should be written as under
  - (i) Kene, D.R. 1991. Relation of soil properties with growth and performance of crops. *J. Soils and Crops* 1(2) 5-11.
  - (ii) Gokhale, K.V.G.K. and T.C. Rao, 1983. Ore deposits of India. 3rd Ed. Affiliated East-West Press Pvt. Ltd., New Delhi. pp. 70-89.
  - (iii) Deotale, R.D. 1990. Effect of fertilizer doses and hormones on morphological, physiological and biochemical parameters of *Leucaena leucocephala* (Lam.) de-wit. Unpublished Ph.D. Thesis, Dr. PDKV, Akola pp. 271.
- 9} All correspondence relating to membership and the Journal should be addressed to Dr. R.D. Deotale, Secretary, Association of Soils and Crops Research Scientists Nagpur, 21, Anand Nagar, Atrey Layout, Ranapratap Nagar, P.O. Nagpur-440 022 (M.S.) India.
- 10} First author of the research paper/short communication will be solely responsible for any legality involved in its publication. Association of Soil & Crops will not be responsible for plagiarism and genuineness of the data suspected by any person.
- 11} All the authors mentioned in the communication should be subscribers of this Journal. An individual institution can become a subscriber by paying Rs. 750/- as annual subscription. However, subscription of the author contributing research paper will be Rs. 150/- in addition to printing and other charges to be borne by him. Subscribers from other countries will pay equivalent amount in US dollars besides postal charges.

**Abbreviation of the Journal**  
**J. Soils and Crops**

JOURNAL OF SOILS & CROPS

