## CONTENTS

<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>411</td>
<td>Occurrence of different strains of Papaya Ring Spot Virus (PRSV) on papaya in Marathwada region of Maharashtra</td>
<td>M.G. Kalyankar, D.D. Nirmal and Mini S.</td>
</tr>
<tr>
<td>414</td>
<td>Response of varied nutrient levels on growth and yield of rainfed hybrid castor</td>
<td>D. M. Sridharamurthy, S.D. Sundar Singh and N. Ananda</td>
</tr>
<tr>
<td>417</td>
<td>Performance of new rice (Oryza sativa) varieties at different nitrogen levels under transplanted condition</td>
<td>Braham Singh and Raj Veer Singh</td>
</tr>
<tr>
<td>421</td>
<td>Knowledge level of vegetable growers on nutrient management practices in cabbage–potato cropping system in district Kolar</td>
<td>K.V. Ramachandra, V.L. Madhuprasad and V.N. Shivananadam</td>
</tr>
<tr>
<td>425</td>
<td>Cross-protection ability of the mild strains of papaya ring spot virus against severe strain in Papaya</td>
<td>M.G. Kalyankar, D.D. Nirmal and Mini S.</td>
</tr>
<tr>
<td>429</td>
<td>Influence of organic manures and bioregulators on growth and yield of ashwagandha</td>
<td>M. Mohanalakshmi and E. Vadivel</td>
</tr>
<tr>
<td>433</td>
<td>Communication strategy for rural development programmes</td>
<td>Ram Karan Singh and J.P. Srivastava</td>
</tr>
<tr>
<td>438</td>
<td>Studies on relationship between peak runoff rate and morphological characteristics of watershed</td>
<td>Sandeep P. Nikam and Sanjay S. Dhanpule</td>
</tr>
<tr>
<td>441</td>
<td>Screening of antagonists and effects of their cultural filtrate on growth, biomass and conidal germination of Fusarium oxysporum</td>
<td>S.P. ciceri causing chickpea wilt, in vitro</td>
</tr>
<tr>
<td>446</td>
<td>Response of potash and foliar spray of cow urine on growth and yield of summer greengram (Vigna radiata L.)</td>
<td>S.M. Patil, A.V. Khairnar, H.M. Patil and C.B. Gaikwad</td>
</tr>
<tr>
<td>450</td>
<td>Evaluation of locally available substrates and grains spawn for production of Pleurotus sajor-caju</td>
<td>R.C. Verma, K.K. Mishra and R.P. Singh</td>
</tr>
<tr>
<td>453</td>
<td>Nutrient content and their uptake influenced by integrated nutrient management in maize (Zea mays L.)</td>
<td>J.K. Balyan and B.S. Kumpawat</td>
</tr>
<tr>
<td>457</td>
<td>Effect of blade profile and stagger angle as system parameters on blower performance for tractor mounted sleeve boom sprayer for cotton</td>
<td>P.U. Shahare and S. M. Mathur</td>
</tr>
<tr>
<td>461</td>
<td>Opinion of farmers towards privatisation of agricultural extension services</td>
<td>M. Jegadessan and T. Rajendran</td>
</tr>
<tr>
<td>463</td>
<td>Genetic divergence in Maize</td>
<td>A.S. Gautam</td>
</tr>
<tr>
<td>469</td>
<td>Bulb yield and processing qualities of onion (Allium cepa L.) as influenced by integrated nutrient management in kharif season under rainfed condition</td>
<td>B. Mahanthesh, M. Harshavardhan, V. Srinivasa, M. Ravi Prasad Sajan and G.N. Thippeshappa</td>
</tr>
<tr>
<td>475</td>
<td>Growth, yield and economics of wheat (Triticum aestivum) as influenced by biofertilizers with nitrogen levels</td>
<td>K.K. Zade and Mohd. Kaleem</td>
</tr>
<tr>
<td>477</td>
<td>Cost and return structure of sugarcane- livestock based farming system in Gonda district of Uttar Pradesh</td>
<td>Ram Suresh and Hubba Lal Singh</td>
</tr>
<tr>
<td>480</td>
<td>Adoption of eco-friendly management practices by vegetable growers of north Karnataka</td>
<td>K.K. Shashidhara and L. Manjunath</td>
</tr>
<tr>
<td>485</td>
<td>Comparative performance of rice (Oryza sativa) hybrids at different fertility levels under irrigated transplanted condition</td>
<td>Braham Singh and Raj Veer Singh</td>
</tr>
<tr>
<td>489</td>
<td>Utilization, preference and credibility of farm information sources</td>
<td>Ram Karan Singh and J.P. Srivastava</td>
</tr>
<tr>
<td>496</td>
<td>Induction of callus for secondary metabolite extraction in ashwagandha</td>
<td>M. Mohanalakshmi and E. Vadivel</td>
</tr>
<tr>
<td>499</td>
<td>Growth and yield of greengram [Vigna radiata (L.) Wilczek] as influenced by increased plant density and nutrient management</td>
<td>K. Sathiyamoothi, M. Mohamed Amanullah, K. Vaiyapuri and E. Somasundaram</td>
</tr>
<tr>
<td>506</td>
<td>Productivity in irrigated uplands</td>
<td>A.P. Sivamurugan, P. Saravanane, P. Jagathambal and Y. Getharagowri Rekha</td>
</tr>
<tr>
<td>519</td>
<td>Shift in the association of characters and utility of biparental mating in rice under aerobic condition</td>
<td>K. Amudha and S. Arumugachamy</td>
</tr>
<tr>
<td>523</td>
<td>Conservation practices and sulphur nutrition under rained condition</td>
<td>P. M. Vaghasia and V. D. Khanpara</td>
</tr>
<tr>
<td>527</td>
<td>Yield advantage analysis and competition on barley-wheat intercropping in the central highlands of Eritrea</td>
<td>A. Woldeamlaka, P.C. Struik and J.K. Sharma</td>
</tr>
<tr>
<td>532</td>
<td>Study on variation and selection parameters in ragi genotypes (Eleusine coracana Gaertn.)</td>
<td>D.D. Kadam, R.D. Nigade and S. R. Karad</td>
</tr>
</tbody>
</table>

---

**INTERNATIONAL JOURNAL OF AGRICULTURAL SCIENCES**

Vol. 4 No. 2

June, 2008
Extent and constraints in use of teaching aids by the teachers of Punjab Agricultural University, Ludhiana - Lakhwinder Kaur, S.K. Saini and Jasmandeep Singh

Yield and nutrient status of soil at harvest of hybrid rice (Sahyadri-2) as influenced by integrated nutrient management - S.B. Ghodake, A.C. Sawant, P.G. Chavan and P.P. Pawar

Induced genetic variability in winter rape (Brassica napus L.) - M. N. Khan and A.G. Rather

Effect of foliar application of DAP and Znso₄ on groundnut productivity - R. Chandrasekaran, E. Somasundaram, M. Mohamed Amanullah, K. Thrirukumar and K. Sathyamoorthy

Performance of groundnut (Arachis hypogaea) varieties to different dates of sowing in rabi season - S.M. Dhadge, J.B. Shinde, H.M. Patil and N.V. Vandhekar

Influence of brassinolide in overcoming temperature stress in sunflower seedlings - R. Amutha and S. Muthulaksmi

Economics of onion production as influenced by integrated nutrient management practices under irrigated situations during kharif and rabi seasons - G. Mahanthesh, M. Harshavardhan, G. Janardhan, M. Ravi Prasad Sajjan and Vishnuvardhanna

Constraints faced by banana growers in production marketing and finance of banana cultivation - S.S. More, D.G. Duddate and B. M. Kalalbandi


Balance nutrition in rainy season groundnut (Arachis hypogaea L.) for higher production and net return - R.A. Singh, Mohd. Shamim and R.K. Pandey

Influence of organic and inorganic sources of nutrients on yield in cropping systems - A. P. Sivamurugan, Y. Gethara Gowri Rekha, P. Jagathambal and P. Saravanane


Influence of organic and inorganic sources of nutrients on seed yield in cropping systems - A. P. Sivamurugan, Y. Gethara Gowri Rekha, P. Jagathambal and P. Saravanane

Effect of different dates of sowing and weather parameters on sunflower necrosis virus disease and its thrips vector - B.K. Lokesh, Nagaraju, K.S. Jagadish and Y.G. Shadakshari

Physical properties of kodo millet (Paspalum scrobiculatum L.) - Bhawna Shirsat, S. Patel, S.D. Kulkarni, P.H. Bakane and Manisha Khodkar

Effect of polythene mulch, plant population and land configurations on the yield attributes and yield of rabi groundnut - V.A. Rajemahadik, S.A. Chavan and H.S. Bhagade

Relative susceptibility of some maize genotypes to Stiophilus oryzae Linn. (Coleoptera : Curculionidae) - B.P. Chavan, R.B. Khot and P.N. Harer

Performance evaluation of power tiller drawn groundnut digger - P.A. Munde, R.G. Nadre, K.J. Kamble and R.G. Bhagyawant

Influence of socio-personal, economic and psychological characteristics of vegetable growers on adoption of eco-friendly management practices - K.K. Shashidhara and L. Manjunath

Micrografting in cocoa (Theobroma cacao L.) - M.R. Bindi and V.K. Mallika

Influence of plant growth promoting rhizobacteria on growth and yield of groundnut - R. Chandrasekaran, E. Somasundara, M. Mohamed Amanullah, K. Tirukumaran and K. Sathyamoorthi

Testing and performance analysis of solar sterilizer - S.R. Kalbande

Integrated nutrient management in groundnut-field pea cropping system - R.A. Singh and Ehlilq Haider

Influence of integrated nutrient management practices under irrigated situations during kharif and rabi seasons - G. Mahanthesh, M. Harshavardhan, G. Janardhan, M. Ravi Prasad Sajjan and Vishnuvardhanna

Remedial measures used by the farmers to control the weeds and diseases in wheat crop - Gagandeep, S. K. Saini and Kuldip Kumar

Effect of sowing dates on growth and yield of sorghum (Sorghum bicolor (L.) Moench.) genotypes in early summer season - A.R. Chitte, A.G. Wani, H.M. Patil and B.T. Shete

Bulb size and other characters of onion bulbs as influenced by onion cultivars in rainy season - B. Mahanthesh, M. Ravi Prasad Sajjan, M. Harshavardhan, Vishnuvardhanna and G.N. Thippeshappa

Effect of methods of sowing and levels of fertilizer on yield of niger (Guizotia abyssinica Cass) under rain fed condition in Maharashtra - S.M. Dhadge, H.S. Patial, H.M. Patil, N.V. Vandhekar


Study of different floating materials to control evaporation in small farm ponds - N.D. Bhugat, S.P. Nikam and V.K. Balsane
Studies on the effect of neem derivatives on the fecundity of country bean pest *Pericallia ricini* fab. (Lepidoptera : Arctidae) - N. Revathi and S. Kingsley

Effect of integrated nutrient management on the performance of dwarf scented rice (*Oryza sativa* L.) grown in rice-wheat sequence - D.K. Sharma, Kedar Prasad and S.S. Yadav

Character association, genetic variability and path-coefficient analysis in rice (*Oryza sativa* (L.)) - S.R. Karad and K.M. Pol

Plant characters correlation and path coefficient analysis of seed yield in exotic french bean (*Phaseolus vulgaris* L.) germplasm - K. B. Bhushan, Sandeep Jadli, Omvati Verma and Amrit K. Goswami

Studies on the effect of root exudates of different crops on pigeon pea wilt pathogen (*Fusarium udum* Butler) and its antagonistic fungi - V. Bharathi, K. Chandrasekhar Rao and L. Kishan Reddy

Evaluation of farmer participatory on farm trials in Saurashtra region of Gujarat, India - P. M. Vaghasia

Effect of various botanicals and organics on the germination and seedling vigour of ambrate - R. Rajeswari and Arumugam Shakila

Studies on antioxidant enzymes of heat tolerance in sunflower (*Helianthus annuus* L.) - R. Amutha and S. Muthulaksmi

Biography of dimond back moth, *Plutella xylostella* (L.) (Lepidoptera: Yponomeutidae) on cabbage and Indian mustard - Wajid Hasan and C. P. Singh

Efficacy of different Phosphorus solubilizing micro-organisms (PSM) and source of phosphorus on yield of summer groundnut (*Arachis hypogaea* L.) - S.M. Dhadge, H.M. Patil and N.V. Wandeekar

A Case Study : Impact of land configuration on run off soil loss and yield of cotton - S.B. Jadhav, M.S. Pendke, S.N. Pawar and S.R. Kalbande

Farmer’s suicide and distress - Devendra Prasad Pandey


Information about sources consulted for farmers by nutrient management practices in cabbage-potato cropping system - K.V. Ramachandra, V.L. Madhuprasad and V.N. Shivanandam

Bioefficacy study of atonik 0.3 % and plant growth regulator in cotton - H.M. Patil, A.G. Wani and S.S. Bhosale

Mechanism of antibiosis in the *Trichoderma* spp., *Acrophialophora*, fluorescent pseudomonas and *Fusarium oxysporum* f.sp.ciceri interaction responsible for causing chickpea wilt - S.S. Mane and Mahendra Pal


Nutrient uptake and yield of bold seeded summer groundnut as influenced by different layouts and spacing - C.A. Chaudhari, H.M. Patil and C.B. Gaikwad

Incidence of insect pests and their natural enemies on maize - B.P. Chavan, R.B. Khot and P.N. Harer

Constraints in adoption of nutrient management practices in cabbage-potato cropping system in Kolar district - K.V. Ramachandra, V.L. Madhuprasad and V.N. Shivanandam

Correlation studies between grain yield and growth, yield and quality parameters in durum wheat (*Triticum durum* Desf.) - N. Ananda and B.N. Patil

Screening of promising hybrids and entries of Pearl Millet against downy mildew and ergot in Dhule and Pune region - K.N. Chaudhari, S.S. Mane, G.T. Bhangale and S.R. Pardeshi