



IRDPC
REMOVING BARRIERS IN THE RESEARCH

International Conference on Agriculture, Rural Development and Health Science

(ICARDH-2022)

Sep 17-18, 2022

Souvenir



International Research
and Development Center
for Publication (IRDPC)

www.irdcp.org



International Conference on Agriculture, Rural Development and Health Science (ICARDH-2022) Sep 17-18, 2022

Copyright © 2022 International Research and Development Center for Publication

DOI: [10.22161/conf.icardh.sep.2022](https://doi.org/10.22161/conf.icardh.sep.2022)

Publisher

IRDCP

Email: irdcp.publication@gmail.com / conference.irdcp@gmail.com

Web: <https://irdcp.org/>

About IRDCP

International Research and Development Center for Publication (IRDCP) is a non-profit organization for promoting research and development around the world. IRDCP is the bridge between the quality publisher and researchers. It provides the platform to researchers and academicians for publication in the Scopus Indexed Journals, SCI Journals, Web of Science Journals, UGC Approved Journals, NAAS Rated Journals, Google Scholar Indexed Journals and other good quality DOI journals.

IRDCP is also a partner organization for publication in conference proceedings. We organize the International conferences for publication in SCOPUS indexed and other refereed journals as per the requirement of the authors of the manuscripts. The manuscripts submitted to IRDCP should be plagiarism free and well coherent in all sense.

The scope of publication with the IRDCP covers all type of review and research manuscripts including the Exploratory & Explanatory Research, Descriptive & Theoretical Research, Applied Research & Action Research, Cross-Sectional Research, Quantitative & Qualitative Research in the field of engineering & technology, agriculture & environmental, Social science & Humanities, Literature & Education development, Medical & Health Science.

The vision of IRDCP :

IRDCP endeavors to promote global excellence in the field of research & development through diligent applications of advanced technology for the holistic development of society. Also, IRDCP is committed to motivate and persuade the researchers to take up the projects for the continuous development of human society and make this world a better place to live in. The IRDCP has a steadfast commitment be the fulcrum of the ocean of knowledge around which efforts of researchers move about.

About Conference

International Conference on Agriculture, Rural Development and Health Science (ICARDH-2022)

During the worldwide lockdown due to COVID 19 pandemic, a lot of important activities have come to a halt. However, when we look at the brighter side, all of us have more time for adding to our knowledge and insights.

With this aim, to keep contributing to learning and motivation International research and development Center for publication is going to organize a two-day International Conference with the title “**International Conference on Agriculture, Rural Development and Health Science (ICARDH-2022)**” on Sep 17-18, 2022 through online mode.

We hope, this online mode of the conference in COVID-19 pandemic will be an appreciable step in promoting the research activities and new information between researchers, developers, students, academicians and practitioners working in and around the world by keeping the social distance in view to stop the spread of COVID-19 disease. This conference aims is to present the current researches being carried out in the field of social science and education development around the globe.

Prospective authors from academia as well as industry are invited to submit their abstracts that illustrate original/unpublished works and industrial applications describing advances and significant innovations in the field.

International Advisory Committee

- **Prof. Liu Wenxiang**, Hubei University, Wuhan, China
- **Prof. Dr. Flávio de São Pedro Filho**, Coordinator of the GEITEC / UNIR / CNPq, Brazil. Federal University of Rondônia, Brazil
- **Prof Dr. Noman Omar Sattar**, National Defense University, Islamabad, Pakistan
- **Dr. Sunil Kumar Mishra**, Amity School of Liberal Art, India
- **Dr. Mahona Joseph Paschal**, Service-Learning ambassador in Tanzania.
- **Titus O. Pacho**, Kisii university , Kenya
- **Demetria Gerold Mkulu**, St. Augustine University of Tanzania
- **Dr. Neel Kamal Purohit**, S.S. Jain Subodh P.G. College, Rambagh, Jaipur, India
- **Dr. Parul Mishra**, GD GOENKA University, India
- **Dr. P. D. Nimsarkar**, RTM Nagpur University Nagpur, India
- **Dr. Sandhya Lanjewar**, Central Institute of English Hyderabad, India
- **Dr. Anil Matthew**, Research Supervisor, Former Head of Department of English, Hislop College Nagpur, India
- **Dr. Jyoti Patil**, Principal, Renuka Mahavidyalaya, Besa Nagpur, India
- **Dr. Md Mahadhi Hasan**, Assistant Professor, Department of English, Southeast University, Bangladesh.

Message

I am extremely pleased to share that International Research and Development Center for Publication (IRDCP) is organizing a two days **International Conference on Agriculture, Rural Development and Health Science (ICARDH-2022)** on Sep 17-18, 2022.

I am sure the state of art lectures from the invited experts and the research findings of researchers, academicians, utility engineers will enrich the knowledge of all the participants. It will provide an excellent opportunity for students to learn new ideas.

I offer my best wishes to the whole team of the organizing committee, the participants, and volunteers for the grand success of the conference.

Dr. Kameis Khe
Convenor ICARDH-2022

Message

I am happy to know that International Research and Development Center for Publication (IRDCP) is organizing a two days **International Conference on Agriculture, Rural Development and Health Science (ICARDH-2022)** on Sep 17-18, 2022. I am sure that, this conference would provide an ideal platform for the academicians, scholars and experts to present and exchange their research findings and Ideas.

I wish the conference a great success.

Dr. Shyampada Mandal

INDEX

Sustainable control of *Megaleurothrips distalis* Karny on cowpea (*Vigna unguiculata*) by using indigenous plant-extracts

Sunil Kumar Ghosh

2

Abstract of ICARDH-2022

Sustainable control of *Megaleurothrips distalis* Karny on cowpea (*Vigna unguiculata*) by using indigenous plant-extracts

Sunil Kumar Ghosh *

Department of Agricultural Entomology, B.C.K.V-Agricultural University, Mohanpur,
Nadia, West Bengal, 741252, India.

* Corresponding author Email: skghosh1969@gmail.com ,
sg_bckv2014@rediffmail.com

Abstract— The cowpea (*Vigna unguiculata*), an annual herbaceous legume, is grown as an important vegetable crop in the semiarid regions across Asia including India. The cowpea **crop** is damaged by various insect pests of which cowpea thrips (*Megaleurothrips distalis*) causes damage to the tender leaves of the plant and reduces its yield. Imidacloprid showed most effective against thrips population providing 78.77 % suppression. Mixed formulation, azadirachtin+garlic and azadirachtin+*Spilanthes* provided 75.39% % and 74.76 % thrips control which wereat par with the chemical insecticide, imidacloprid. There was no significant difference among these treatments. From over all observation it was found that botanical pesticide azadiractin, neem fruit aqueous extract, *Spilanthes* flower extract, garlic bulb extract, tobacco leaf extract, provided moderate to higher results, recording about 65.12 %, 50.47%, 49.85 %, 49.40%, and 46.71% thrips control respectively. When plant extract is mixed with plant based insecticides like azadiractin it provides better thrips control on cowpea crop. Plant extracts (bio-pesticides) having less or no hazardous effects on environment can be incorporated in pest management.

Keywords— Bio-pesticides, Plant extract, Vegetables, Organic cultivation, Bio-safety

References

- [1] Bala, S C, Karmakar K and Ghosh S K. 2015. Population dynamics of mite , *Aceria tulipae* Keif. On garlic (*Allium sativum* L.) and its management under Bengal basin. *International Journal of Science, Environment and Technology* **4** (5): 1365-1372.

- [2] Chakraborty K and Ghosh S K. 2010. Incidence of *Coccinella septempunctata* in brinjal with some pesticides. *Current advances in Agricultural Sciences* 2(2): 129-130.
- [3] Das K, Biswas S, Chakraborty G and Ghosh S K. 2010. Efficacy of insecticides against Iassid (*Amrasca biguttula biguttuka* Ishida) on okra in terai agro-ecology of West Bengal. *Journal of Applied Zoological Research* 21 (1): 33-35.
- [4] Ghosh S K. 2017. Seasonal Incidence of aphid (*Aphis gossypii* Glove.) Infesting tomato (*Lycopersicon esculentum* L.) and their management by using botanical pesticides. *International Journal of Advances in Science Engineering and Technology* 5: 14-17.
- [5] Ghosh, S.K. (2018). Phytochemicals-A New Era for Management of Red Spider Mite (*Tetranychus urticae*) on Rose Plant Book Edited by Dr. S.S. Gantait, Book title "Advances in Floriculture and Urban Horticulture" pp. 300-304, 2018.
- [6] Ghosh S K. 2020. Management of sucking pest, jassid (*Amrasca devastans*) and thrips (*Thrips palmi*) on lady'sfinger (*Abelmoschus esculentus* L.) by using safe insecticides. *International Journal of Current Microbiology and Applied Sciences* 9(11):2340-2352. DOI: <https://doi.org/10.20546/ijcmas.2020.911.281>
- [7] Ghosh, S.K.. (2020). Aphid (*Aphis craccivora* Koch.) Management on Groundnut Crop (*Arachis hypogaea*) by using Bio-pesticides. *Int.J.Curr.Microbiol.App.Sci.* 9(10): 24-34. doi: <https://doi.org/10.20546/ijcmas.2020.910.004>
- [8] Ghosh, S.K. (2021) Bio-efficacy of plants based formulations for the management of cowpea aphid (*Aphis craccivora* Koch.) *Legume Research-An International Journal*, Online First Publication. DOI:[10.18805/LR-4636](https://doi.org/10.18805/LR-4636)
- [9] Ghosh, S.K. (2015). Integrated field management of aphid (*Myzus persicae* Sulz. And *Aphis gossypii* Glov. Together) on potato (*Solanum tuberosum* L.) using bio-pesticides *International Journal of Science, Environment and Technology.* 4 (3): 682-689.
- [10] Ghosh S K and Chakraborty G. 2012. Integrated field management of *Henosepilachna vigintioctopunctata* (Fabr.) on potato using botanical and microbial pesticides. *Journal of biopesticides* 5 (supplementary): 151-154.
- [11] Ghosh, S.K. and Chakraborty, G (2010) Climate change impact in the population of lady bird beetle on vegetable crops and harmful effect of insecticides. Book Edited by Smita Asthana and Elizabeth Margaret, Book title "climate change-issues and

concerns” pp. 60- 64, 2010. (IUP – publication, University Campus, Agartala, Tripura ISBN: 978-81-314- 2701-9).

- [12] Ghosh S K, Mandal T, Biswas S and Chakraborty K. 2012. Field evaluation of cultivars and bio-efficacy of insecticides against pest complex of ladysfinger (*Abelmoschus esculentus* L.). *Journal of Applied Zoological Research* **23**(2): 121-128.
- [13] Ghosh S K, Mandal T, Biswas S. and Chakraborty K. 2012. Field evaluation of cultivars and bio-efficacy of insecticides against pest complex of ladysfinger (*Abelmoschus esculentus* L.). *Journal of applied Zoological research* **23**(2): 121-128.
- [14] Ghosh S K, Mandal T and Chakraborty K. 2013. Efficacy of chemical insecticides and neem oil against white fly (*Bemisia tabaci* Genn.) Infesting ladysfinger (*Abelmoschus esculentus* L.). *International Journal of Bio-resource and Stress Management* **4** (2): special 348-351.
- [15] Ghosh, S.K., Mandol, T. and Chakraborty, K. (2016). Population fluctuation of aphid (*Aphis craccivora* Koch..) infesting Som plant leaves (*Machilus bombycina* King..) and its management. *J. Ent.Res..* **40** (3): 235-241.
- [16] Mandal T, Ghosh S K and Chakraborty K. 2016. Seasonal incidence of thrips (*Thrips tabaci* L.) infesting Som plant leaves (*Machilus bombycina* King..) and their management using bio-pesticides *International Journal of Science, Environment and Technology* **5** (4): 2245-2256.
- [17] Mandal T and Ghosh S K. 2021. Leaf Miner (*Phytomyza* spp.) Infestation on Som Plant (*Machilus bombycina* King) and Plant based Formulation for their Sustainable Management. *Pakistan Journal of Zoology* **53** (6), 2241-2246.
- [18] Priyadarshini S, Ghos, S K and Nayak A K. 2019. Field screening of different chilli cultivars against important sucking pests of chilli in West Bengal. *Bulletin of Environment, Pharmacology and Life Sciences (JEZS)* **8**(7): 134-140.
- [19] Purkait, A., Biswas, S., Saha, S., Hazra, D.K., Roy, K., Biswas, P.K., Ghosh, S.K. and Kole, R.K. (2019). Formulation of plant based insecticides, their bio-efficacy evaluation and chemical characterization. *Crop Protection*. 125: 104907, 1-9.
- [20] Subba B, Ghosh S K. 2016. Population dynamics of Thrips (*Thrips tabaci* L.) Infesting tomato (*Lycopersicon esculentum* L.) and their sustainable management. *International Journal of Agricultural Science and Research (IJASR)* **6** (3): 473-480.

- [21] Thakoor P, Ghosh S K and Bala S C. 2020. Effect of abiotic factors on seasonal incidence and bio-efficacy of some newer insecticides against white fly on tomato crop in West Bengal. *Journal of Entomology and Zoology studies* **8**(3): 267-271.