



FIRST INTERNATIONAL CONFERENCE ON BIOLOGICAL CONTROL

APPROACHES & APPLICATION

27 - 29 SEPTEMBER, 2018

BENGALURU, INDIA

September 27 - Thursday				
08:00-09:00	Registration			
09:00-10:00	Inaugural Session			
10:00-10:30	Refreshment Break			
10:30-11:00	Opening lecture (Coronet Hall) Why so many manuscripts are rejected for publication? An editorial perspective - Quirico Migheli			
Time	Coronet Hall	Senate Hall	Time	Orchid Hall
	Session 1: Biodiversity, Biosecurity and Conservation Strategies	Session 2: Biotechnological Approaches in Biocontrol		Session 8: Third International Workshop of the IOBC Global Working Group on Biological Control and Management of Parthenium Weed
11:00-11:30	Biodiversity bugs pests: An ecological perspective- Krishna Kumar N K	Small insecticidal molecules against crop pests- Raj Kamal Bhatnagar	11:00-11:10	Welcome & Housekeeping - Lorraine Strathie
11:30-12:00	Biosystematics, biodiversity and biocontrol relationships- Ramamurthy VV	Role of transgenic <i>Bt</i> -crops in promoting biological control and integrated pest management- Manjunath T M	11:10-11:20	Opening of Parthenium Weed Workshop - Rangaswamy Muniappan
12:00-12:15	Pest management services through conservation of biological control agents: review, case studies and field experiences- Abraham Verghese	Yeast volatile organic compounds inhibit ochratoxin - A production by <i>Aspergillus carbonarius</i> (Bainier)- Quirico Migheli	11:20-11:50	Keynote address – Biological control of parthenium weed (<i>Parthenium hysterophorus</i> L.): Australian experience - Kunjithapatham Dhileepan
12:15-12:30		Silencing of a <i>Meloidogyne incognita</i> mucin-like gene reduces <i>Pasteuria penetrans</i> endospore adhesion on the juvenile cuticle surface - Uma Rao	11:50-12:05	Theme: Spread and impact of <i>Parthenium hysterophorus</i> (Chair: Lorraine Strathie) Nationwide survey of parthenium weed infestation in Bangladesh: risk and threat for food security. Ilias Hossain



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			12:05-12:20	Current spread and integrated management to contain parthenium weed in India- Sushil Kumar
			12:20-12:30	Parthenium Weed Workshop Group photo- All
12:30-14:00	Lunch Break			
14:00-14:15	Research to support New Zealand's plant border biosecurity - Barbara Barratt	<i>Trichoderma virens</i> XYPPX repeat protein (XRP1) is involved in regulation of conidiation and mycoparasitism- Ravindra Bansal	14:00-14:15	Will parthenium weed become more invasive in the future? - The effect of elevated CO ₂ on seeds characteristics- Runping Mao
				Theme: Evaluation of biological control Chair: Sreerama Kumar Prakya
14:15-14:30	Predatory and parasitic insects associated with the dubas bug in date palm orchards in Oman and relationship with insecticide application - Ali AlWahaibi	Expression of a novel insecticidal protein from a bryophyte for control of sap sucking pests of cotton - Subhi Srivastava	14:15-14:30	Host range evaluation of the leaf-feeding beetle <i>Zygogramma bicolorata</i> and the stem-boring weevil <i>Listronotus setosipennis</i> demonstrates their suitability for biological control of the invasive weed <i>Parthenium hysterophorus</i> in Ethiopia- Wondi Mersie
14:30-14:45	Invasive alien plant species in Nepal - Pramod Kumar Jha	Prospecting for novel <i>Bacillus thuringiensis</i> holotype crystal toxin genes in India - Singaravelu B	14:30-14:45	Incidence of <i>Parthenium hysterophorus</i> and its eco-friendly control by <i>Zygogramma bicolorata</i> in Chitrakoot, Madhya Pradesh, India- Ramesh Chandra
14:45-15:00	Conservation strategies for management of insect pests of tobacco- Sreedhar Uppalapati	Characterization of an insecticidal binary-toxin 'Photox' from Indian isolates of entomopathogenic <i>Photobacterium</i> bacteria - Vishal Somvanshi	14:45-15:00	Age, mating status and sex influence food consumption and utilisation efficiency of parthenium weed beetle, <i>Zygogramma bicolorata</i> Pallister- Bhupendra Kumar
15:00-15:15	Enhancing biological suppression through manipulation of ephemeral rice field habitat - Chitra Shanker	Management of <i>Bt</i> resistant pink bollworm, <i>Pectinophora gossypiella</i> in transgenic cotton by Cry1Ac-Vip3AcAa fusion protein: A molecular modeling study- Sindhu Thangaraj	15:00-15:15	Impact of <i>Zygogramma bicolorata</i> on growth of <i>Parthenium hysterophorus</i> in Nepal- Seerjana Maharjan



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15:15-15:30	An Indian perspective of the neglected players for the control of nasty sucking pests - Ankita Gupta	Evaluating the bio-insecticidal potential of recombinant spider venom peptide, μ -digue toxin-Dc1a, against two major lepidopteran insect pests of cotton - Balwant Singh	15:15-15:30	Discussion- All
15:30-16:00	Refreshment Break			
16:00-16:15	A systematic account of weed infesting fruit flies (Diptera: Tephritidae) in India - David K J	Morphological and molecular characterization of <i>Microplitis maculipennis</i> Szépligeti (Hymenoptera: Braconidae) from India with notes on its generic placement - Venkatesan T		Theme: Evaluation of biological control (continued) - Chair: Wondi Mersie
			16:00-16:15	Spread of the leaf-feeding beetle <i>Zygogramma bicolorata</i> for the biological control of the invasive weed <i>Parthenium hysterophorus</i> in Ethiopia- Million Abebe
16:15-16:30	Diversity of entomopathogenic nematodes from Uttar Pradesh and its virulence against major insect pests of vegetables - Manjunatha G T	Mining <i>Pseudomonas koreensis</i> P2 genome for key antimicrobial genes involved in biological control of plant diseases - Alok Kumar Srivastava	16:15-16:30	Predicting establishment of the leaf-feeding beetle <i>Zygogramma bicolorata</i> (Coleoptera: Chrysomelidae) for the management of <i>Parthenium hysterophorus</i> (Asteraceae: Heliantheae) in India: A machine learning approach- Yoghita Gharde
16:30-16:45	Characterization of bacterial diversity associated with brown planthopper, <i>Nilaparvata lugens</i> (Stål) and their role in insecticide resistance- Guru Pirasanna Pandi	Double-stranded RNA-mediated silencing of Chitin Synthase (ChS) gene affects larval development in <i>Leucinodes orbonalis</i> - Shipra Saxena	16:30-16:45	Establishment and early impact of introduced natural enemies to control <i>Parthenium hysterophorus</i> in South Africa- Lorraine Strathie
16:45-17:00	Stethorini (Coleoptera: Coccinellidae) associated with phytophagous mites of south India - Vidya C V	<i>de novo</i> genome sequencing and hybrid assembly approaches for complex insect genomes - Dushyant Singh Baghel	16:45-17:00	Current status of biological control of <i>Parthenium hysterophorus</i> using mycoherbicide- Ajay Kumar Singh
17:00-17:15	Record of prostigmatid predatory mites from Himachal Pradesh - Jayaram C S		17:00-17:15	Phytotoxic effect of <i>Abutilon indicum</i> , <i>Tephrosia purpurea</i> , <i>Prosopis juliflora</i> and <i>Cassia occidentalis</i> - Ethanolic extracts on germination and seedling growth of the



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				globally invasive weed <i>Parthenium hysterophorus</i> - Aishwarya Andhare
17:15-17:30	Validation of IPM in cotton in whitefly hot spot in North India - Anoop Kumar		17:15-17:30	Theme: New initiatives- Chair: Wondi Mersie
				Distribution and current efforts in biological control of <i>Parthenium hysterophorus</i> in Uganda- Richard Molo
17:30-20:00	ICBC 2018 Poster session		17:30-18:15	Discussion - All
20:00	<p style="text-align: center;">Gala Dinner</p>			



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	Coronet Hall	Senate Hall	Time	Orchid Hall
	Session 3: Production and Utilization of Microbials for Insect Pest and Disease Management	Session 4: Biological control Compatible Approaches		Session 8: Third International Workshop of the IOBC Global Working Group on Biological Control and Management of Parthenium Weed
				Theme: New initiatives (continued)- Chair: Million Abebe
08:30- 08:45	Biological control in compliance with the Nagoya Protocol: access and benefit sharing - David Smith	Recent collaborative research progress in pheromone-based trapping systems for agri- horticultural pests management in India- Sithanantham S	08:30- 08:45	Techniques to rear three insect agents for the biological control of <i>Parthenium hysterophorus</i> in South Africa - Lorraine Strathie
08:45- 09:00			08:45- 09:00	Importation and quarantining of the seed- feeding weevil <i>Smicronyx lutulentus</i> for prospective control of <i>Parthenium hysterophorus</i> in India - Sreerama Kumar Prakya
09:00- 09:15	<i>Trichoderma</i> for plant disease management- A gift of God to mankind - Mukhopadhyay A N	Antifungal activity against <i>Monosporascus cannonballus</i> and plant growth- promoting potential of bacteria isolated from rhizosphere of melon in Oman - Dhuha Al Daghari	09:00- 09:15	Initiation of a classical biological control programme against <i>Parthenium hysterophorus</i> in Pakistan- Philip Weyl
09:15- 09:30			09:15- 09:45	Discussion - All
		Effect of <i>Bacillus</i> spp. and plant extracts from <i>Impatiens balsamina</i> L. on anthracnose disease caused by <i>Colletotrichum</i> spp. on mango in Vietnam – Nguyen Van Hoa		



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09:30-09:45	Entomopathogenic fungal x bacterial interactions: potential implications for aphid biocontrol- Justin Hatting	Fruit fly management in Nepal - a case from plant clinics- Debraj Adhikari		
09:45-10:00	A baseline study using Plantwise information to assess the contribution of extension services to the uptake of augmentative biological control in selected low to lower middle-income countries- Steven Edgington	Effect of insecticides on adult and preimaginal stages of <i>Trichogramma chilonis</i> Ishii (Hymenoptera: Trichogrammatidae) and its parasitisation potential - Kamaldeep Sangha	09-45-10:30	Recommendations arising from Parthenium Weed Workshop - All
10:00-10:15	Bio-protection of cucumber seedlings from <i>Pythium aphanidermatum</i> with native antagonistic rhizobacteria- Issa Al-Mahmooli	Bio-intensive pest management in rice – Go green initiative! - Gururaj Katti		
10:15-10:30	Microbial control of filth flies using fungal, viral, and bacterial agents - Christopher Geden	Compatibility and efficacy of entomopathogenic nematode-insecticide combinations against <i>Holotrichia consanguinea</i> Blanch. (Coleoptera: Scarabaeidae) - Jagadeesh Patil		
10:30-10:45	Emerging opportunities in field of capacity building and development to promote use of microbial pesticide in Asia - Malvika Chaudhary	Biofumigation - An effective tool in enhancing yield of capsicum (<i>Capsicum annuum</i>) by suppressing soil-borne pathogens and augmenting biopesticides like <i>Trichoderma viride</i> and <i>Pseudomonas fluorescens</i> under protected cultivation in India - Swapan Ghosh	10:30-10:50	Future actions and directions of the IOBC Global Working Group on Parthenium Weed - All
10:45-11:00	Characterization and evaluation of nucleopolyhedroviruses against lepidopteran pests of crops- Sivakumar G	Eco friendly pest and disease management practices in groundnut - Gayathri Subbiah	10:50-11:00	Closing remarks & closure of Parthenium Weed Workshop- Lorraine Strathie
11:00-11:30	Refreshment Break			



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				Session 9: Workshop of the IAPPS Working Group on <i>Tuta absoluta</i> - Biology, Ecology and Management
11:30-11:45	Potential use of bacterial endophytes and carbendazim tolerant <i>Trichoderma</i> for the management of pomegranate wilt caused by <i>Ceratocystis fimbriata</i> - Sriram S	Compatibility of insecticides with entomopathogenic fungi, <i>Metarhizium</i> spp. and <i>Beauveria</i> spp. for bio-intensive management of pink mealybug, <i>Maconellicoccus hirsutus</i> (Green) in grapes, <i>Vitis vinifera</i> Linnaeus - Deependra S Yadav	11:30-12:00	Chair: Rangaswamy Muniappan Keynote address: Multi-pathway models to understand the spread and impact of <i>Tuta absoluta</i> - Abhijin Adiga
11:45-12:00	Entomopathogenic nematodes: Isolation from sugarcane fields of subtropical India, bio-efficacy studies against white grub and mass production by monoxenic liquid fermentation technique - Sankaranarayanan Chellappa	Exploitation of mutualistic fungal symbiont <i>Fusarium ambrosium</i> for the suppression of tea shot holeborer, <i>Euwallacea fornicatus</i> - Mahendran P		
	Session 5: Biological Control of Invasive Pests and Weeds	Session 4: Biological control Compatible Approaches		
12:00-12:15	Classical biological control of invasive weeds – a historical perspective, challenges and future prospects - Djami Djeddour	BIPM modules against shoot and fruit borer, <i>Leucinodes orbonalis</i> (Guenée) in eggplant, <i>Solanum melongena</i> L. - Rabinder Kaur	12:00-12:15	Role of IPM Innovation Lab in Management of <i>Tuta absoluta</i> - Rangaswamy Muniappan
12:15-12:30		Impact of transgenic Bt cotton (Cry1Ac and Cry2Ab) on the parasitoid, <i>Aenasius arizonensis</i> (Girault): a host mediated tri-trophic analysis - Parminder Shera	12:15-12:30	<i>Tuta absoluta</i> Workshop Group photo - All
12:30-14:00	Lunch Break			
14:00-14:15	Functional traits variation of an invasive weed <i>Ageratina adenophora</i> (Asteraceae) along an elevation gradient in Chitwan-	Developing biocontrol and bio-based recommendations for plant doctors in Myanmar using CABI Plantwise online data -	14:00-14:15	Tomato pinworm, <i>Tuta absoluta</i> (Meyrick): Biology, host range, population build-up and biocontrol options for its management -



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	Annapurna Landscape, Nepal - Anju Sharma Poudel	Kyin Kyin Win		Mohan M
14:15-14:30	The spiralling whitefly, <i>Aleurodicus dispersus</i> Russell (Hemiptera: Aleyrodidae) in banana plantations in Costa Rica - Helga Blanco-Metzler	Efficacy of entomopathogens for the management of leafhoppers (<i>Idioscopus</i> spp.) and thrips (<i>Scirtothrips dorsalis</i> Hood) on mango - Poluru V Reddy	14:15-14:30	Thermal requirements of <i>Tuta absoluta</i> (Meyrick) and influence of temperature on its population growth on tomato – Sharma P L
14:30-14:45	Effects of different temperatures on development and reproduction of <i>Aenasius arizonensis</i> (= <i>bambawalei</i>) (Hymenoptera: Encyrtidae) - Nooshin Zandi Sohani	Effect of herbicides on feeding, survival and development of <i>Haltica cyanea</i> , potential biocontrol agent of the dicot weed, <i>Ammana baccifera</i> , in rice ecosystem- Padmakumari AP	14:30-14:45	Controlled release matrix for delivery of South American tomato moth, <i>Tuta absoluta</i> (Meyrick) (Lepidoptera: Gelechiidae) pheromone - Subaharan K
14:45-15:00	Identification and characterization of larval salivary gland polytene chromosomes of the peach fruit fly, <i>Bactrocera zonata</i> (Saunders) (Diptera: Tephritidae) - Farzana Yesmin	Investigation, electrophysiological and behavioural response to the GLV and sex pheromone components of Indian rice pink stem borer, <i>Sesamia inferens</i> (Walker), (Lepidoptera: Noctuidae) - Sampathkumar M	15:00-15:15	Distribution and genetic diversity of tomato leafminer, <i>Tuta absoluta</i> population in India in relation to sterile insect technique application – Ashok Hadapad
		Session 7: Biological Control: Industrial Perspective and Policy Issues		
15:00-15:15	Releases of egg parasitoid, <i>Anastatus fulloi</i> for control of litchi stink bug, <i>Tessaratoma papillosa</i> - Yi Hui Wu	Access and benefit sharing and classical biological control: The role of IOBC - Barbara Barratt	15:00-15:15	Functional response of indigenous species <i>Nesidiocoris tenuis</i> (Reuter) to invasive leafminer, <i>Tuta absoluta</i> (Meyrick)- Saraswati Negi



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15:15-15:30	Area wide farmer participatory biomangement of rhinoceros beetle in coconut plantations - Chandrika Mohan		15:15-15:30	Evaluation of biological control options for the management of <i>Tuta absoluta</i> (Meyrick) (Lepidoptera: Gelechiidae) on tomato – Sridhar Vaddi
15:30-15:45	Impact of release of classical weed controlling agent <i>Cecidochares connexa</i> (Macquart) (Diptera: Tephritidae) on the population of Siam weed <i>Chromolaena odorata</i> King and Robinson (Asteraceae) in Karnataka - Shylesha A N	Current status and future perspectives of natural enemies for pest control in Taiwan - Lu Mei-Chun	15:30-15:45	Efficacy of integrated pest management tools evaluated against <i>Tuta absoluta</i> (Meyrick) (Lepidoptera: Gelechiidae) on tomato in India – Padavala Swathi
15:45-16:00	Aphid population modified the biocontrol activity of ladybirds - Desh Deepak Chaudhary	Evaluation of different volumes of larvae L3 of <i>Ceratitis capitata</i> in parasitic devices to <i>Diachasmimorpha longicaudata</i> in massive breeding conditions in the fruit fly national program, Costa Rica - Rosy Morera-Montoya	15:45-16:00	<i>Tuta absoluta</i> , a new pest in IPM tomatoes in the Senegal - Elhadji Seigne Sylla
16:00-16:30	Refreshment Break			
16:15-16:30	Biological suppression of invasive rugose spiraling whitefly <i>Aleurodicus rugioperculatus</i> Martin in coconut - Selvaraj K	An assessment on the role of different stakeholders for the promotion of bio-pesticides in Nepal - Shalik Adhikari	16:15-16:30	Evaluation of different management options against South American tomato leafminer, <i>Tuta absoluta</i> in Nepal – Lalit Sah
16:30-16:45	Influence of weaver ant, <i>Oecophylla smaragdina</i> Fabricius (Hymenoptera: Formicidae) on mealybug parasitism by encyrtid parasitoid (Chalcidoidea: Encyrtidae) - Nalini T S	Development, registration and commercialization of smart agri biologicals for sustainable crop production and protection: challenges and opportunities - Virender Dhingra	16:30-16:45	Risk assessment and management of tomato leafminer, <i>Tuta absoluta</i> - Hossain M S



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16:45-17:00			16:45-17:05	Discussion - All
			17:05-17:15	Closing remarks & closure of <i>Tuta absoluta</i> Workshop – Rangaswamy Muniappan
17:15-18:30	ICBC Poster session			
18:30-20:00	Cultural Events			
20:00	Dinner			
Time	September 29 - Saturday			
08:30	Field visit for Third International Workshop of the IOBC Global Working Group on Biological Control and Management of Parthenium Weed			
	Coronet Hall			
	ICBC Session 6: Production and Utilization of Macrobiales for Insect Pest Management			
08:30-09:00	Optimizing the genetics of biocontrol agents for classical and augmentative applications - Richard Stouthamer			
09:00-09:30	Macrobiales losing out to microbiales: How to tilt the scales? - Chandish R Ballal			
09:30-09:45	Classical biological control of insects and their impact in developed and developing countries: A comparison using the BIOCAT database - Stefan Toepfer			
09:45-10:00	Efficacy of augmentative release of the parasitoid wasp, <i>Bracon hebetor</i> Say against the pearl millet ear-head miner - Mame Fatoumata Goudiaby			
10:00-10:15	Optimizing the mass production system of lacewing - Hungju Chen			
10:15-10:30	Biological control potential of two species of tephritid fruit fly by parasitoid wasps (Braconidae: Opiinae) - Mor Salomon			



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10:30-11:00	Refreshment break
11:00-11:15	A new approach in the tricho card preparation for the inundative release of <i>Trichogramma</i> spp. - Jeyarajan Nelson S
11:15-11:30	Incidence of egg and larval parasitoids of <i>Chilo partellus</i> (Swinhoe) in kharif maize - Pradyumn Kumar
11:30-11:45	Spatial distribution of cabbage aphid, <i>Brevicoryne brassicae</i> (L.) and its parasitoid, <i>Diaeretiella rapae</i> (McIntosh), under sub-temperate conditions of Himachal Pradesh, India - Subhash Chander Verma
11:45-12:00	Potential of <i>Sancassania</i> sp. as a biocontrol agent of white grub species (Coleoptera: Scarabaeidae) - Sreedevi Kolla
12:00-12:15	Field efficacy of the larval parasitoid, <i>Bracon brevicornis</i> (Wesmael) for the management of mulberry leaf roller, <i>Diaphania pulverulentalis</i> Hampson on mulberry in Tamil Nadu and its safety to silkworm, <i>Bombyx mori</i> Linnaeus - Mahiba Helen
12:15-12:30	Influence of host plant on the biology of <i>Tetranychus truncatus</i> Ehara (Prostigmata: Tetranychidae) and its predator, <i>Neoseiulus longispinosus</i> (Evans) (Mesostigmata: Phytoseiidae) - Haseena Bhaskar
12:30-14:00	Lunch Break
14:00-14:15	Reproductive performance of <i>Trichomalopsis uziae</i> Sureshan and Kumar, as influenced by density of its female and host with a note on host exposure duration for parasitism- Narendra Kumar J B
14:15-14:30	Effect of inoculative releases of <i>Trichogramma chilonis</i> Ishii against early shoot and internode borers in sugarcane – Visalakshi Mahanthi
14:30-14:45	Studies on the predatory potential of <i>Geocoris ochropterus</i> (Fieber) (Hemiptera: Lygaeidae) – Richa Varshney
14:45-15:00	Biointensive pest management strategies for the control of bud borer, <i>Hendecasis duplifascialis</i> Hampson, and blossom midge, <i>Contarinia maculipennis</i> Felt in jasmine - Suganthi Gopinathan
15:00-16:00	Poster Session
16:00-16:30	Plenary session
16:30-17:30	Refreshment break followed by General Body Meeting of Society for Biocontrol Advancement, Bengaluru



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Poster Sessions: Utsav Hall

Session 1: Biodiversity, Biosecurity and Conservation Strategies (September 27 - Thursday)

- S1 PP 1** **New distributional record of *Steinernema hermaphroditum* (Nematoda: Steinernematidae) from Kerala, India**
Anes K M, Jinu Sivadasan, Merin Babu and Joseph Rajkumar A
- S1 PP 2** **Diversity of spiders in the tomato ecosystem**
Anusree S S and Mithra Mohan
- S1 PP 3** **Characterization of entomopathogenic nematodes from subtropical regions of India and their efficacy against soil-dwelling life stage of *Helicoverpa armigera***
Devindrappa M, Jagadeesh Patil, Bansa Singh and Krishan Kumar
- S1 PP 4** **Survey and surveillance of natural enemies in mango ecosystem**
Gundappa, Balaji Rajkumar and Shukla P K
- S1 PP 5** **The diversity of coccinellid predators of sucking pests on temperate fruits in Jammu and Kashmir**
Mahendiran G
- S1 PP 6** **Diversity, abundance and predation potential of major aphidophagous predators of *Aphis odinae* (Van der Goot) (Hemiptera: Aphididae) in cashew**
Maruthadurai R and Desai A R
- S1 PP 7** **Predictive habitat distribution modelling framework for root-knot nematode, *Meloidogyne enterolobii* - an emerging pest in India**
Prasanna Holajjer, Sivaraj N, Bharath H Gawade, Khan Z and Sarath Babu B
- S1 PP 8** **Biodiversity of pollinators in four bee-friendly plant species**
Pratheepa M, Amala U and Shivalingaswamy T M
- S1 PP 9** **Arthropod diversity in rose, jasmine and cock's comb ecosystem**
Ramya R S, Ganesh Kumar M and Ranjith M
- S1 PP 10** **Report of a mermithid nematode infecting *Spodoptera* spp., *Amyna axis* and *Chrysodeixis* spp. in the southern districts of Rajasthan**
Ramesh Babu S, Somvanshi V S, Meena P K, Victor Phani, Khan M R, Khushbu Chauhan and Pramod Rokadia



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- S1 PP 11** Seasonal incidence and natural enemy complex of aphid, *Aphis punicae* Passerini (Hemiptera: Aphididae) infesting pomegranate in Kashmir
Sajad Mir and Naveed Anjum
- S1 PP 12** Redescription and biology of a common predatory pentatomid, *Eocanthecona furcellata* (Wolff) (Hemiptera: Pentatomidae: Asopinae)
Salini Santhamma
- S1 PP 13** Diversity of erebid moth (Lepidoptera: Erebiidae) of Aligarh, Uttar Pradesh, India, their pest status and biocontrol to some economically important plants
Shahabab Ahmad Farooqui and Hina Parwez
- S1 PP 14** A comparison on abundance of parasitoids and predators in organic and conventional basmati rice
Sudhendu Sharma, Shera P S and Sangha K S
- S1 PP 15** Crop diversification enhances conservation of native predatory bug, *Nesidiocoris tenuis* (Reuter) (Heteroptera: Miridae) in tomato
Amala U, Shivalingaswamy T M and Pratheepa M
- S1 PP 16** Social spider, *Stegodyphus sarasinorum* as a bio-control agent and its conservation strategies
Sampathkumar M and Chitra Shanker
- S1 PP 17** Banker plants for augmentation and conservation of *Encarsia sophia* (Hymenoptera: Aphelinidae) for sustainable control of whitefly, *Bemisia tabaci* (Hemiptera: Aleyrodidae) in polyhouses
Gopalakrishna Pillai and Ganga Visalakshy
- S1 PP 18** Intercropping – a way for *in situ* conservation of natural enemies in pigeonpea, *Cajanus cajan*
Shivalingaswamy T M, Raghavendra A, Amala U and Shylesha A N
- S1 PP 19** Taking advantage of the Foldscope in biocontrol research and practice
Sreerama Kumar Prakya
- S1 PP 20** Utility of nematodes as baits for diversity analysis of nematophagous fungi from selected agro-climatic zones of India
Rami Kassam, Deeba Kamil and Uma Rao
- S1 PP 21** Plant growth promoting and biocontrol *Actinobacteria* from temperate regions
Radha T K, Rupa T R, Selvakumar G, Ganeshamurthy A N and Chinthana K L
- S1 PP 22** The first report of *Steinernema cholashanense* (Rhabditida: Steinernematidae) from India and its biocontrol potential against potato pests
Priyank Mhatre, Jagadeesh Patil, R Vijayakumar, EP Venkatasalam and Divya K L



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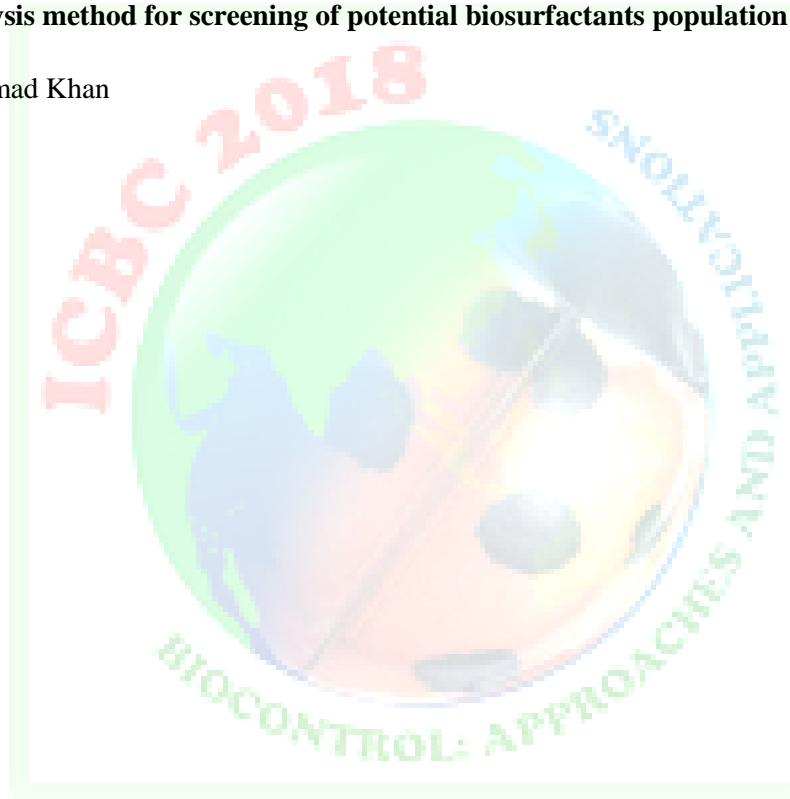
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S1 PP 23 **Natural enemies in mango ecosystem**

Shivamurthy and Jiji T

S1 PP 24 **An easy high throughput analysis method for screening of potential biosurfactants population isolated from Shakurbasti railway diesel engine yard**

Touseef Hussain and Abrar Ahmad Khan





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Session 2: Biotechnological Approaches in Biocontrol (September 27 - Thursday)

- S2 PP 1 **Diversity and molecular phylogeny of Bt receptor genes in the genome of brinjal shoot and fruit borer, *Leucinodes orbonalis* (Lepidoptera: Crambidae)**
Kariyanna B, Aditi Agrawal, Venkatesan T, Gandhi Gracy R, Jalali S K and Mohan M
- S2 PP 2 **Development of transgenic cotton (*Gossypium hirsutum* L.) over expressing a pectin methylesterase gene for broad spectrum resistance against crop insects**
Alka Srivastava, Gourav Jain and Praveen C Verma
- S2 PP 3 **Molecular characterization and phylogeny of Indian coccinellids**
Gandhi Gracy R, Venkatesan T, Srinivasa Murthy K and Jalali S K
- S2 PP 4 **Identification of Cry toxin receptor homologs in a *de novo* transcriptome and their altered expression in resistant pink bollworm *Pectinophora gossypiella***
Aditi Agrawal, Venkatesan T, Gandhi Gracy R, Mohan M, Ramya R S and Rangeshwaran R
- S2 PP 5 **Extract, Transform, Load (ETL): A data warehouse technique involved in decision support system for assisting in integrated pest management**
Cruz Antony J and Pratheepa M
- S2 PP 6 **Identification and isolation of arcelin gene from bruchid resistant pulse variety, *Phaseolus lunatus* by designing gene specific primer**
Hilda K, Bhuvaragavan S and Janarthanan S
- S2 PP 7 **Combining proteomics and transcriptome sequencing to identify putative RNAi targets for the mealybug, *Phenacoccus solenopsis* and their functional validation**
Sanchita Singh, Surjeet Kumar Arya, Praveen C Verma and Subhi Srivastava
- S2 PP 8 **Fern rhizome lectin confers broad-spectrum insect resistance in transgenic tobacco - Sushmita and Praveen C Verma**



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Session 3: Production and Utilization of Microbials for Insect Pest and Disease Management (September 28 - Friday)

- S3 PP 1 ***Pseudomonas fluorescens* as a biological control agent against *Plutella xylostella* in cabbage**
Kandan A, Amala U, Rangeshwaran R, Bakthavatsalam N and Chandish R Ballal
- S3 PP 2 **Potential of entomopathogenic fungi against tea mosquito bug, *Helopeltis antonii* Signoret infesting cashew**
Smitha M S, Nithin K N and Sobhana A
- S3 PP 3 **Role of aphid derived bacteria in degradation of neonicotinoid insecticide imidacloprid**
Mahesh Yandigeri, Sanjay Yalashetti, Mohan M and Sivakumar G
- S3 PP 4 **Bioefficacy of different biopesticides against major foliage feeders on soybean [*Glycine max* (L.) Merrill]**
Hemant Swami
- S3 PP 5 **Microbial biocides – prominent alternatives of tea disease management**
Satya Ranjan Sarmah, Pranabanand Bhattacharyya, Rofika Begum, Prsanta Dutta and Anoop Kumar Barooah
- S3 PP 6 **Comparative efficacy of liquid and talc-based formulations of *Trichoderma asperellum* with tebuconazole against *Cercospora* leaf spot of bhindi**
Reshmy Vijayaraghavan, Dilna N, Anjaly Varghese and Fridin Davis
- S3 PP 7 **Cow manure compost inoculated with *Trichoderma* isolate for the management of sunflower charcoal rot caused by *Macrophomina phaseolina***
Raja J
- S3 PP 8 **Biological control of tomato collar rot by endophyte *Bacillus haynesii* 2P2**
Pramod Kumar Sahu, Brahma prakash G P and Anil K Saxena
- S3 PP 9 **Comparative infectivity of *Lecanicillium* spp. to rice hoppers**
Hari Sankar S S and Reji Rani O P



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- S3 PP 10** **Sequence analysis and bioassay of *Bacillus thuringiensis* (NBAIR-BTAN4) shows that it is a promising candidate for coleopteran and lepidopteran pests**
Rangeshwaran R, Mohan M, Shylesha A N, Mahesh Yandigeri, Apoorva V, Sivakumar G and Jagadeesh Patil
- S3 PP 11** **Management of chilli anthracnose using mycopesticides**
Neelam Joshi, Sangha K S, Shera P S and Buttar D S
- S3 PP 12** **A success story in developing and commercializing a biopesticide “SOLDIER”- A wettable powder formulation of an entomopathogenic nematode, *Heterorhabditis indica* for managing cryptic pests in different agroecosystems in India**
Kumar S, Ghosh S K, Natraj T and Mahesh G Shetty
- S3 PP 13** **Isolation and characterization of *Serratia marcescens*, as a bacterial pathogen in fruit piercing moths, *Eudocima (Othreis) materna* (L.) (Lepidoptera: Noctuidae)**
Vandana Viswanath, Arthikirubha Ayyasamy and Kamala Jayanthi P D
- S3 PP 14** **Isolation of entomopathogenic nematodes (EPNs) and their bio-efficacy against insect-pests of sugarcane in Maharashtra**
Yogesh Thorat, Borse D N, Holkar S K, Pathak A D and Singh S N
- S3 PP 15** **Evaluation of entomopathogenic fungi against *Bemisia tabaci* in tomato and capsicum under protected cultivation**
Ramanujam B and Poornesha, B
- S3 PP 16** **Survey on polyhouse pests of vegetable cowpea in Kottayam district of Kerala and their management using entomopathogenic fungi**
Sible George Varghese, Praveena R and Ambikadevi D
- S3 PP 17** **Role of gut microflora in toxicity of *Bacillus thuringiensis* subspecies *galleriae* to the larvae of *Spodoptera litura* (Lepidoptera: Noctuidae)**
Sanjay Yalashetti, Onkarappa Rudrappa, Mahesh S Yandigeri and Mohan M
- S3 PP 18** **Evaluation of bioagents for the management of nematodes in cardamom**
Chinchu P Babu and Narayana R
- S3 PP 19** **Isolation, identification and evaluation of native isolate of entomopathogenic nematode, *Heterorhabditis indica* Poinar, Karunakar and David (Tylenchida: Rhabditidae) against banana stem weevil, *Odoiporus longicollis* (Olivier) (Coleoptera: Curculionidae)**
Giribabu Palaniappan, Anuradha C, Padmanaban B, Anitha Sree T and Uma S



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- S3 PP 20** **Bio-efficacy of different biological control agents for the management of chilli fruit rot/anthracnose disease**
Raghunandan B L, Mayank V Patel, Neha M Patel and Mehta D M
- S3 PP 21** **Efficacy of bio-agent formulations towards the management of stem blight of sesame caused by *Macrophomina phaseolina* (Tassi) Goid.**
Suresh Madugula, Gangadhara Rao S V S and Upendra Rao A
- S3 PP 22** **Evaluation of spinosyn from *Streptomyces parvulus* for the control of polyphagous pests like *Spodoptera litura* and *Helicoverpa armigera***
Ponsugumari Mahalingam and Unnamalai N
- S3 PP 23** **Cross infection of *Pieris brassicae* granulosis virus with other siblings of *Pieris* species**
Ramaiyer Varatharajan, Sangeeta W, Sujata PH and Rachana R R
- S3 PP 24** **Integrating entomopathogenic nematodes and microbes for managing ash weevil (*Myllocerus subfasciatus*) menace in brinjal**
Umamaheswari R, Rao M S and Ganga Visalakshy P N
- S3 PP 25** **Evaluation of bioagents for their compatibility for the development of consortium to enhance their efficacy**
Amirtha Lingam V, Tewari A K, Manju Sharma, Jatinder Kumar and Roopali Sharma
- S3 PP 26** **A novel suspension concentrate formulation of *Bacillus thuringiensis* var. *kurstaki* for effective management of major lepidopteran pests**
Nataraj T, Ghosh S K and Usha Nandini
- S3 PP 27** **Pathogenicity testing of indigenous isolates of entomopathogenic fungus, *Lecanicillium lecanii* against tobacco caterpillar, *Spodoptera litura***
Sairam Kumar D V, Dhanapal R, Sandhya Rani C H, Manoj Kumar V and Lakshmiopathy R
- S3 PP 28** **Evaluation of certain bio pesticides against sucking pests of BhutJalakia**
Rudra Narayan Borkakati, Saikia D K and Ramanujam B
- S3 PP 29** **Bioefficacy of fungal biopesticides against *Lipaphis erysimi* Kalt. (Hemiptera: Aphididae) in mustard crop**
Bhagaban Patro and Shallini Godsora
- S3 PP 30** **Biological control of key pest of jute, *Spilosoma obliqua***
Gotyal B S
- S3 PP 31** **Infectivity of entomopathogenic fungal bio-agents on yellow mite, *Polyphagotarsonemus latus* Banks of jute**
Subrata Satpathy, Gotyal B S and Ramesh Babu V



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- S3 PP 32** **Efficacy of botanicals and fungal formulations for pest management in okra**
Udhayakumar V S, Karthik V, Khaviya Bala, Suresh K and Muthukumar P K
- S3 PP 33** **Eco-friendly management of lepidopteran insect pests through entomopathogenic nematodes**
Rashid Pervez and Uma Rao
- S3 PP 34** **Field evaluation of potential bioagents against chickpea wilt complex**
Manju Sharma, Tewari A K, Roopali Sharma and Kumar J
- S3 PP 35** **Validation of bioagent consortium at farmer's fields**
Tewari A K, Manju Sharma, Roopali Sharma and Kumar J
- S3 PP 36** **Isolation, evaluation and characterization of indigenous *Streptomyces* isolates for the management of stem and pod rot caused by *Sclerotium rolfsii***
Gururaj Sunkad , Khadarbi, Deepa H and Mahadevaswamy
- S3 PP 37** **Biointensive management of foliar blight and wilt of tomato in Uttarakhand**
Bhupesh Chandra Kabdwal, Roopali Sharma, Rashmi Tewari, Tewari A K and Kumar J



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Session 4: Biocontrol Compatible Approaches (September 28 - Friday)

- S4 PP 1** **Effect of bioprotectant on the seasonal incidence of gram pod borer *Helicoverpa armigera***
Anil Vyas and Gaurang Chhangani
- S4 PP 2** **Influence of certain newer insecticides on natural enemy population in rice ecosystem**
Devu Rakshith Roshan and Raju S V S
- S4 PP 3** **In search of chemical cues for attracting *Triommata coccidivora* (Diptera: Cecidomyiidae), a potential predator of mealybugs**
Jayanthi Mala B R, Kamala Jayanthi P D, Shivashankara K S and David K J
- S4 PP 4** **Effect of horticultural mineral oil on *Tetranychus truncatus* Ehara (Prostigmata: Tetranychidae) and its predator *Neoseiulus longispinosus* (Evans) (Mesostigmata: Phytoseiidae)**
Kavya Yadav and Haseena Bhaskar
- S4 PP 5** **Development of bio-rational based management approach against mango hopper in Bangladesh**
Md. Shahadath Hossain
- S4 PP 6** **Biochemical mechanism of resistance to tomato fruit borer, *Helicoverpa armigera* (Hubner) in mid hills of Himachal Pradesh**
Priyanka Thakur, Rana R S, Sharma K C and Nitesh Sharma
- S4 PP 7** **Compatibility of the entomopathogenic fungi *Lecanicillium saksenae* with chemical, botanical and microbial pesticides**
Reji Rani O P
- S4 PP 8** **Integrating biological control and insecticide-an effective management strategy for maize stem borer *Chilo partellus* Swinhoe**
Srinivasa Murthy Kotilingam and Choubey B K
- S4 PP 9** **Essential oil based nanoemulsion for housefly, *Musca domestica* management**
Senthoorraja R, Sowmya M, Subaharan K, Subramanya T M, Vinay and N. Bakthavatsalam
- S4 PP 10** **Breaking plant defenses: The case of tannin expulsion in *Hyblaea puera* Cramer**
Bindu K Jose, Sajeev T V and Anoop E V



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- S4 PP 11** **Toxicity of reduced risk insecticides on common green lacewing *Chrysoperla zastrowi sillemi* (Neuroptera: Chrysopidae) larvae via ingestion and direct spray techniques under laboratory conditions**
Kodandaram M H, Deepak Kushwaha and Rai A B
- S4 PP 12** **Efficacy of phytoncides on coconut rhinoceros beetle, *Oryctes rhinoceros* Linn.**
Ravindran Pattali, Kesavan Subaharan, Chandran K P, Vibina, Subramanya T M and Senthoorraja R
- S4 PP 13** **Management of fruit borer, *Helicoverpa armigera* (Hübner) infesting tomato**
Safna M and Kumud V Naik
- S4 PP 14** **The efficacy of *Streptomyces* spp., *Bacillus* spp and extracts of *Impatiens balsamina* on the mycelial growth of the fungi *Colletotrichum truncatum*, *C. gloeosporioides* causing anthracnose disease on dragon fruit**
Dang Thi Kim Uyen, Rangaswamy Muniappan, Tran Vu Phen and Nguyen Van Hoa



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Session 5: Biological control of invasive pests and weeds (September 28 - Friday)

- S5 PP 1** **Current status of invasive rugose spiralling whitefly, *Aleurodicus rugiopectus* Martin (Hemiptera: Aleyrodidae), in Karnataka, India**
Sanjay Kumar Pradhan and Shylesha A N
- S5 PP 2** **Bioefficacy of entomopathogenic nematodes against serpentine leaf miner, *Liriomyza trifolii* Burgess (Diptera: Agromyzidae) in oilseed crops**
Gayatri Bandaru and Duraimurugan P
- S5 PP 3** **Temperature dependent development of *Oenopia conglobata* (L.) (Coleoptera: Coccinellidae) fed on *Aphis gossypii* (Glover) (Hemiptera: Aphididae)**
Mohammad Amin Jalali and Mahdi Ziaaddini
- S5 PP 4** **Status of new invasive coconut rugose spiralling whitefly, *Aleurodicus rugiopectus* Martin and scope for bio-control in Tamil Nadu**
Rajamanickam K, Srinivasan T, Ramaraju K, Alagar M, Selvaraj K and Venkatesan T
- S5 PP 5** **Population fluctuation of cotton mealy bug, *Phenacoccus solenopsis* Tinsley in relation to weather parameters in Bt cotton ecosystem**
Arunkumar Hosamani, Hanchinal S G and Akshatha G
- S5 PP 6** **The role of computational analysis in the phylogenetic interpretation of the classical biological control**
Namrata Singh, Sunil Archak, Vinod Pandit and Malvika Chaudhary
- S5 PP 7** **Biocontrol of five invasive weeds of Meghalaya- A Case Study**
Rajib Kumar Borah, Jimi Borah and Shahnin Akhtar Islam



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Session 6: Production and Utilization of Macrobiols for Insect Pest Management (September 29 - Saturday)

- S6 PP 1** **Integrating biocontrol agents with farmers' practices for the management of diamondback moth, *Plutella xylostella* (Linnaeus), in cabbage**
Omprakash Navik, Ramya R S, Jalali, S K, Shivalingaswamy T M and Jagadeesh Patil
- S6 PP 2** **Evaluation of bio-control agents against shoot and fruit borer, *Earias vittella* (Fabricius), on okra**
Sharad Galande, R V Nakat, Pokharkar D S, Tamboli N D, Hole U B and Kharbade S B
- S6 PP 3** **Resource-efficient and cost-reduction technology for *Trichogramma chilonis* Ishii production**
Lakshmi Manisha Bachu, Visalakshi M, Sairam Kumar D V and Kishore Varma P
- S6 PP 4** **Development of an abiotic-stress tolerant strain of the egg parasitoid, *Trichogramma chilonis* Ishii, and its utilization for pest management in India**
Jalali S K
- S6 PP 5** **Influence of photoperiod and temperature on the biological parameters of four trichogrammatids**
Lalitha Y, Jalali S K, Venkatesan T and Omprakash Navik
- S6 PP 6** **Developmental biology and predatory potential of *Stethorus punctillum* Weise against two-spotted spider mite, *Tetranychus urticae* Koch, on ladies' finger**
Rajendra Nath Singh, Sandeep Kumar Sathua, Shafia Zainab, Raghuraman M and Srivastava C P
- S6 PP 7** **Feeding potential of the coccinellid, *Cheilomenes sexmaculata* (Fabricius) (Coleoptera: Coccinellidae), on cowpea aphid, *Aphis craccivora* Koch**
Jayalakshmi Ganguli, Sonalika Kolhekar, Ganguli R N and Saurabh Padamshali
- S6 PP 8** **Tri-trophic interaction of the different diet-fed *Corcyra cephalonica* (Stainton) on feeding efficiency of reduviid predator, *Sycanus collaris* (Fabricius), under laboratory conditions**
Rathindra Nath Ganguli
- S6 PP 9** **Efficacy of the egg parasitoid, *Trichogramma chilonis* Ishii, in the management of brinjal shoot and fruit borer, *Leucinodes orbonalis* (Guenee)**



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Manoj Kumar Mahla, Gaurang Chhangani and Beerender Singh

S6 PP 10 **Ecofriendly management of *Pseudodendrothrips mori* Niwa (Thysanoptera: Thripidae) and its impact on abundance of predatory coccinellids in mulberry ecosystem**

Nalliappan Sakthivel and Sivaprasad V

S6 PP 11 **Survey for parasitoids of shoot, panicle and capsule borer, *Conogethes punctiferalis* (Guenee), (Lepidoptera: Crambidae) of small cardamom in Cardamom Hill Reserve (CHR), Kerala**

Thiyagarajan Ponnusamy, Praseeda A S and Rema Shree A B

S6 PP 12 **Field efficacy of *Pediobius imbrues* (Hymenoptera: Eulophidae) parasitoid on coconut slug caterpillar *Macroleptra nararia* Moore (Lepidoptera: Limacodidae)**

Chalapathi Rao N, Krishna Rao G and Ramanandam G

