

**Name** : Dr. Mani Chellappan  
**Designation** : Professor (Entomology) & Dean,  
College of Agriculture  
**Specialization** : Insect Physiology/Apiculture/Vertebrate pest  
management

**Academic Career**

- a. Ph. D : Indian Agricultural Research Institute (**IARI**), New Delhi
- b. M. Sc (Ag. Ent): Tamil Nadu Agricultural University, Coimbatore,
- c. B. Sc (Ag) : Tamil Nadu Agricultural University, Coimbatore

**Overseas Experience**

- a. Hawkesbury Institute for the Environment, Western Sydney University, Sydney, Australia – Workshop on Pollinator Plus
- b. University of Johannesburg, South Africa – International Barcode Of Life
- c. Kasetsart University, Bangkok – International Gene School

**Professional Experience**

- a. Dean, College of Agriculture, KAU, Thrissur
- b. Chief Editor, Journal of Tropical Agriculture, KAU
- c. Holding Professor and Head, Department of Agricultural Entomology, College of Horticulture, KAU, Thrissur (since 1<sup>st</sup> June, 2017)
- d. Worked as Agricultural Research Scientist at ICAR Research Complex for Goa, Ela, Old Goa (from 10<sup>th</sup> Nov. 1994 to 4<sup>th</sup> May 1999)

**Achievements / recognition / awards received**

- a. Agricultural Research Service 1991
- b. National Eligibility Test 1991
- c. Agricultural Research Service 1992
- d. IARI Senior Research Fellowship 1990
- e. ICAR Junior Research Fellowship 1988
- f. Award for Best Innovative showcasing of Eco-friendly Technologies- South Indian Agri Fiesta, 2014
- g. KAU Best Teacher Award – 2020

h. Fellow of Entomological Society of India – 2020

- i. KAU Best Researcher Award - 2021

**External Examiner for**

- SAUs
- External Member for Hawkesbury Institute for the Environment – Western Sydney University, Sydney, Australia

**Research Guidance**

- a. Ph D. : Major Advisor – 7 and as Advisory Committee Member – 35
- b. PG : Major Advisor – 15 and as Advisory Committee Member – 63
- c. Internship: 5

**Research Projects handled**

Handled nineteen research projects, funded by ICAR, RKVY, NABARD, GoK. DoA - GoK

**Extension Activities**

- a. Farmer's awareness programme on entomology, agricultural ornithology, wild animal management, apiculture, honey hygiene, honey processing and value addition of bee hive products
- b. Training on invasive pest and their management and apiculture for students, bank/Department of Agriculture/VFPCK personnel/farmers
- c. Exhibitions - South Indian Agri Fiesta, VAIGA, Pooram exhibitions, etc
- d. Electronic and social media to disseminate eco-friendly technologies

**Publications / Research articles/Manuals/leaflets/Popular articles/ Books (last 5 years)**

**a. Publications -Research**

Anusree Padmanabhan P. S. and **Mani Chellappan** 2023. Nesting biology of allodapine bee *Braunsapis picitarsis*(Cameron) from South India. *Curr. Sci.* 124 (1) 102-107.

Anusree Padmanabhan P.S., **Mani Chellappan** and Henna Kadarkutty. 2019. Characterisation of endosymbionts of cotton mealybug (*Phenacoccus solenopsis* Tinsley) on Okra using metagenomics approach *International Journal of Chemical Studies*, 7(1): 744-750.

Anusree Padmanabhan, P.S. and **Mani Chellappan** 2021. A comparative study on nest architecture and life cycle of two small carpenter bees, *Ceratina smaragdula* Fabricius and *Ceratina hieroglyphica* Smith (Hymenoptera: Apidae). *Indian J. Entomol.* *Dol.:*10.5958/0974-8172.2021.00158.9.

Anusree, R.P., Pathrose, B. and **Mani Chellappan**. 2019. Malathion resistance in red flour

- beetle (*Tribolium castaneum*) (Herbst) (Coleoptera: Tenebrionidae) from FCI godowns of Kerala, India. *J. Trop. Agric.* 57(2): 201-205.
- Ashraf, A., Pathrose, B., **Mani Chellappan** and Indirabai, B.V. 2021. Efficacy of gamma radiation against pulse beetle, *Callosobruchus maculatus* (F.). *Indian J. Entomol.* DOI: 10.5958/IJE.2021.1.
- Elizabeth A Finch, Tim Beale, **Mani Chellappan**, Georg Goergen, Basana Gowd Gadratagi, Mohammed Abul Monjur Khan, Abdul Rehman, Ivan Rwomushana, Arup Kumar Sarma, Kris AG Wyckhuys, I and Darren J Kriticos I 2020. The potential global distribution of the papaya mealybug, *Paracoccus marginatus*, a polyphagous pest. *Pest Management Sci.* DOI:10.1002/ps.6151).
- Harish, E. R., **Mani Chellappan**, Girija, D., Makesh Kumar T., Deepu Mathew and Ranjith M. T. 2019. Next generation sequencing reveals endosymbiont variability in cassava whitefly, *Bemisia tabaci*, across the agro-ecological zones of Kerala, India. *Genome*. 62: 571-584.
- Harish, E. R., **Mani Chellappan**, Makesh Kumar, T., Deepu Mathew, Ranjith, M. T. and Girija, D. 2019. Next-generation sequencing reveals endosymbiont variability in cassava whitefly, *Bemisia tabaci*, across the agro-ecological zones of Kerala, India. *Genome* 62: 571–584.
- Harish, E. R., **Mani Chellappan**, Mathew, D., Kumar, T. M., Ranjith, M. T., Vargheese, E. and Henna, M. K. 2024. Characterization of cassava whitefly (*Bemisia tabaci* (Gennadius) from diverse agro-ecological zones of Kerala, India, reveals the presence of different biotypes as pests in cassava. *Phytoparasitica* 52:5
- Jancy Merlin Johnson, K.B. Deepthy and **Mani Chellappan**. 2020. Tolerance of *Metarhiziumanisopliae* Sorokin isolates to selected insecticides and fungicides *Entomon*, 2020,45(2): 143-148.
- Jasti Sri Vishnu Murthy, **Mani Chellappan**, Ranjith M. T. Smitha Revi, Harish E. R. and Kiran A. G. 2024. Biology and morphometrics of cassava mealybug, *Phenacoccus manihoti* Matile-Ferrero, 1977 (Hemiptera: Pseudococcidae). *Animal Biology* 74 (4): 353-365, doi: <https://doi.org/10.1163/15707563-bja10143> (NAAS rating: 7.20)
- Mani Chellappan**, Ranjith, M. T., Chaudhary, V. Sreejeshnath, K. A. 2023. Bird Pests: Damage and Ecofriendly Management. *Annals of Arid Zone* 62(4): 361-372.
- Mani Chellappan**, Ranjith, M.T., Chaudhary, V. and Sreejeshnath, K.A. 2023. Bird Pests: Damage and Ecofriendly Management. *Annals of Arid Zone* 62(4): 361-372.
- Manjushree, G. and **Mani Chellappan** 2019. Biology of pink pineapple mealybug *Dysmicoccus brevipes* (Cockerell). *Indian Journal of Entomology*, 81(1), pp.210-212.
- Manjushree, G., **Mani Chellappan** and Madhu Subramanian. 2019. Studies on natural enemies of pink pine apple mealybug, *Dysmicoccus brevipes* (Cockerell) (Hemiptera: Pseudococcidae) *Journal of Biological Control* 33(1): 53-56.
- Manjushree, G. **Mani Chellappan** 2019. Evaluation of Entomopathogenic fungus for the management of pink mealybug, *Dysmicoccus brevipes* (Cockerell) (Hemiptera: Pseudococcidae) *Journal of Entomology and Zoology studies* 7(1) 1215-1222.

- Nimisha, T., Deepthy, K.B., Bhaskar, H. and **Mani Chellappan**, 2023. Biochemical basis of abiotic Stress tolerance in native isolates of *Beauveria bassiana* (Balsamo) Vuillemin from Kerala. *Indian J. Entomol.* Online published e 23288 DOI: 10.55446/IJE. 2023.1288
- Nimisha, T., Deepthy, K.B., Haseena Bhaskar, **Mani Chellappan**, Reshmy Vijayaraghavan, Aravindakshan, T.V. 2024. Tolerant native isolates of *Beauveria bassiana* with commonly used pesticides in Kerala. *J. Eco-friendly Agric.* 19(1).
- Nimisha, T., Deepthy, K.B., Subramanian, M. **Mani Chellappan** and Smitha, M. S. 2019. Carboxyl esterase enzyme- biochemical armour in mediating host defence mechanism of tea mosquito bug (*Helopeltis antonii* Signoret Miridae: Hemiptera) - *J. Entomol. Zool. Studies* 7(4): 51-56.
- Nimisha, T., Deepthy, K.B., Subramanian, M. **Mani Chellappan**., Smitha, M. S. and. Girija, T. 2019. Modulation in certain biochemical constituents of cashew as influenced by tea mosquito bug *Helopeltis antonii* Sign. *Indian J. Entomol.* 81(3): 472-476. DOI No: 10.5958/0974-8172.2019.00100.7.
- Pavithrakumar, K. Smitha, M.S., **Mani Chellappan** and Subramanian, M. 2022. Toxicity of some insecticides to life stages of *Cheilomenes sexmaculata* under laboratory conditions. *Indian J. Entomol.* ref. no. e21082 doi.: 10.55446/ije.2022.157.
- Raj, M.R. and **Mani Chellappan**. 2022. Antifeedant activity of aerial and root extracts of *Sphagnetica trilobata* (L) Pruski on *Spodoptera litura* (F.)(Lepidoptera, Noctuidae). *Entomon*, 47(4), pp.453-456.
- Raju, S., Pathrose, B., **Mani Chellappan**, Bhaskar, H. and Sudheer, K.P. 2022. Susceptibility of life stages of *Tribolium castaneum* (Herbst) to microwave radiation. *Indian J. Entomol.* 10.55446/IJE.2022.521.
- Ramakrishna, Bindu Gudi, **Mani Chellappan**, Surendra Gopal Kulkarni, Deepu Mathew, Ranjith Matta Thodikayil, and Shanas Sudheer. "Fungal Diversity Associated with the Hive Stored Pollen of Stingless Bees *Tetragonula travancorica* Shanas and Faseeh." *Journal of Advances in Biology & Biotechnology* 27, no. 5 (2024): 498-503.
- Revi, S., Subramanian, M., and **Mani Chellappan** 2022. Evaluation of endophytic entomopathogenic isolates of *Purpureocillium lilacinum* against root knot nematode, *Meloidogyne incognita*. *Res. J. Agric. Sci.* 14(1): 204-207.
- Shahanaz, M.R., Pathrose, B. and **Mani Chellappan**. 2019. Phagostimulant based bait composition for tobacco caterpillar, *Spodoptera litura* (Fabricius) (Lepidoptera: Noctuidae). *J. Trop. Agric.* 57(1): 54-58.
- Sreeja, P., Lenin, N., Bhaskar, H., **Mani Chellappan** and Bhaskar, D. 2023. Record of *Onomarchus unnotatus* (Serville, 1838) (Orthoptera, Tettigoniidae) as a pest of jackfruit from Kerala, India. *Entomon* 48(1): 95-98. \
- Sreeja, P., Rani, R.O. and **Mani Chellappan** 2023. Characterization of insecticidal metabolite oosporein in *Lecanicillium saksenae* (Kushwaha) Kurihara and Sukarno, a geographically distinct isolate from Kerala, India. *Toxicon*, 230, p.107176.
- Sreeja, P., Rani, R.O.P. and **Mani Chellappan**. 2020. Nematicidal metabolites of *Lecanicillium saksenae* (Kushwaha) Kurihara, Sukarno and bioefficacy against *Meloidogyne incognita* *Ann. Pl. Protect. Sci.* 28(2):163-167

- Thomas, A., Smitha M.S., Pathrose, B. and **Mani Chellappan**. 2024. Variation in the susceptibility of brinjal shoot and fruit borer *Leucinodes orbonalis* Guenee to diamide insecticides and the role of detoxification enzymes. *Indian J. Entomol.* No. e24841
- Vidya, C.V., Sundararaj, R., Dubey, A.K., Bhaskar, H., **Mani Chellappan**., and Henna, M.K. 2019. Invasion and establishment of Bondar's nesting whitefly, *Paraleyrodes bondari* Peracchi (Hemiptera: Aleyrodidae) in Indian mainland and Andaman and Nicobar Islands. *Entomon* 44(2): 149-154. (NAAS :4.42).
- Vineetha, V., **Mani Chellappan**, and Berin Pathrose. 2022. A rapid and easy bioassay method for stingless bees, *Tetragonula travancorica* Shahnas and Faseeh. *Indian J. Entomol.* 1-4. DOI: <http://doi.org/10.55446/IJE.2022.582>.
- Visakh, N.U., Pathrose, B., **Mani Chellappan**, Ranjith, M.T., Sindhu, P.V. and Mathew, D. 2022. Chemical characterisation, insecticidal and antioxidant activities of essential oils from four Citrus spp. fruit peel waste. *Food Biosci.* 50 Part B: 102163. Doi: 10.1016/j.fbio.2022.102163.
- Visakh, N.U., Pathrose, B., **Mani Chellappan**, Ranjith, M.T., Sindhu, P.V. and Mathew, D. 2023. Extraction and chemical characterisation of agro-waste from turmeric leaves as a source of bioactive essential oils with insecticidal and antioxidant activities. *Waste Manage.* 169:1-10. Doi: 10.1016/j.wasman.2023.06.030.

#### **b. Publication - Book Chapter**

- Mani Chellappan**. 2021 Rodents. In: Omkar (eds) *Polyphagous Pests of Crops*. [https://doi.org/10.1007/978-981-15-8075-8\\_2](https://doi.org/10.1007/978-981-15-8075-8_2). pp 457-532.
- Mani Chellappan**, 2021. Hand Holding Entrepreneurs in Honey Processing and Value Addition. In *Entrepreneurship and Skill Development in Horticultural Processing* (pp. 323-343). CRC Press.
- Mani Chellappan** and M. T. Ranjith 2021 Termites. In: Omkar (eds) *Polyphagous Pests of Crops*. [https://doi.org/10.1007/978-981-15-8075-8\\_2](https://doi.org/10.1007/978-981-15-8075-8_2). pp 457-532.
- Mani Chellappan**. 2021 Metagenomic Approaches for Insect Symbionts. In: Omkar (eds) *Polyphagous Pests of Crops*. [https://doi.org/10.1007/978-981-15-8075-8\\_2](https://doi.org/10.1007/978-981-15-8075-8_2). pp 457-532.
- Mani Chellappan**, Divya, K.K., Viswanathan, A. and Mohan, L.K., 2022. Pests and Their Management in Rubber. *Trends in Horticultural Entomology*, pp.1477-1488.
- Mani Chellappan**, Viswanathan, A. and Mohan, L.K., 2022. Pests and their management in pineapple. *Trends in Horticultural Entomology*, pp.689-699.
- Mani Chellappan**, and M. T. Ranjith. Insect Predators. In *Insect Predators in Pest Management*, edited by Omkar, 54. 1st ed. CRC Press, 2023. <https://doi.org/10.1201/9781003370864>.
- Mani Chellappan**, and M. T. Ranjith. Insect Parasitoids. In *Insect Predators in Pest Management*, edited by Omkar, 54. 1st ed. CRC Press, 2023. <https://doi.org/10.1201/9781003370864>.

**Mani Chellappan**, and M. T. Ranjith. Aphelinid Parasitoids. In *Insect Predators in Pest Management*, edited by Omkar, 54. 1st ed. CRC Press, 2023. <https://doi.org/10.1201/9781003370864>.

Smitha, M. S., **Mani Chellappan**, and M. T. Ranjith. Mass Production of Insect Parasitoids. In *Commercial Insects*, pp. 238-269. CRC Press, 2023.

Pathrose, B., **Mani Chellappan**, and Ranjith, M.T., 2023. Mass Production of Insect Predators. In *Commercial Insects*, pp. 270-299. CRC Press.

Ranjith, M. T., and **Mani Chellappan**. Mass Production of Beneficial Insects. In *Commercial Insects*, pp. 300-328. CRC Press, 2023.

Jasti Sri Vishnu Murthy, Ramakrishna, B. G., **Mani Chellappan**, and Ranjith M.T. 2024. Wild Bees – Importance, Threats, and Conservation Challenges'. Insect Conservation - Challenges and Possibilities in a Changing World. IntechOpen. <http://dx.doi.org/10.5772/intechopen.1004403>.

Ramakrishna, Bindu, **Mani Chellappan**, and Ranjith M T. "A Neoteric Perspective in Crop Protection: Chapter 6 - Drones in Pesticide Application." In *A Neoteric Perspective in Crop Protection*, 89–106. 2024. ISBN: 978-93-5813-036-2.

#### c. Publication - Review paper

Subhagan, S.R., Pathrose, B. and **Mani Chellappan**, 2024. Harnessing immune priming: A double-edged defence mechanism in insects. *Physiological Entomology*.

Jasti Sri Vishnu Murthy, Ramakrishna, B. G., Reddy, J., Ranjith, M. T., and **Mani Chellappan**. Microbial defensive symbionts in insects: A comprehensive review. *Plant Archives*, 25(Supplement-1) [Accepted]. (NAAS rating: 5.59).

#### d. Publication - Popular article

**Mani Chellappan** and Chaudhary, V. 2022. Trap Barrier System – an ecofriendly technology for rodent management in paddy field. *ICAR News*. 28(3):1-2.

#### e. Publication – Technical Bulletin

**Mani Chellappan** and Ranjith, M.T. 2022. Purple Moorhen: A new foe to rice cultivation. AINP on VPM, KAU Thrissur. 14 p.

**Mani Chellappan**, Ranjith, M.T. and Sahal, H. 2021. Birds of Agricultural Importance in Kerala. AINP on VPM, KAU Thrissur. 171p.

**Mani Chellappan** and Ranjith, M.T. 2019. Barn Owl- The Rodent Killer. AINP on VPM, KAU Thrissur. 26p.

#### f. Publication - Folders and leaflets



**Mani Chellappan** and Ranjith, M.T. 2023. Management of wild animals through fencing techniques.

(Released during the AINPVPM Annual group meeting held at PJTSAU, Hyderabad)

**Mani Chellappan** and Ranjith, M.T. 2023. Trap Barrier System in Rice Rodent Pest Managament

(Released during the AINPVPM Annual group meeting held at PJTSAU, Hyderabad)

**Mani Chellappan** and Ranjith, M.T. 2023. Management of lesser bandicoot rats in banana and cassava ecosystem. (Released during the AINPVPM Annual group meeting held at PJTSAU, Hyderabad)

**Mani Chellappan** and Ranjith, M.T. 2023. Management of wild animals through fencing techniques. (Released during the AINPVPM Annual group meeting held at PJTSAU, Hyderabad)

**Mani Chellappan** and Ranjith, M.T. 2022. Low-cost wild boar management methods. (Released during the AINPVPM Annual group meeting held at ICAR-CAZRI, Jodhpur)

**Mani Chellappan** and Ranjith, M.T. 2022. Porcupine- a threat to agriculture in Kerala. (Released during the AINPVPM Annual group meeting held at ICAR-CAZRI, Jodhpur)

**Mani Chellappan** and Ranjith, M.T. 2022. Malabar Giant Squirrel- Am emerging pest to plantation crops. (Released during the AINPVPM Annual group meeting held at ICAR-CAZRI, Jodhpur)

**Mani Chellappan** and Ranjith, M.T. 2019. BoRep against wild boar. (Released during the AINPVPM Annual group meeting held at PJTSAU, Hyderabad)

**Mani Chellappan** and Ranjith, M.T. 2019. DeeRep against deer. (Released during the AINPVPM Annual group meeting held at PJTSAU, Hyderabad)

**Mani Chellappan** and Ranjith, M.T. 2019. Purple Moorhen- an emerging threat to rice cultivation. (Released during the AINPVPM Annual group meeting held at PJTSAU, Hyderabad)

**Mani Chellappan** and Ranjith, M.T. 2019. *Maanukalkkethire DeeRep* (Malayalam) (Released during the AINPVPM Annual group meeting held at PJTSAU, Hyderabad)

**Mani Chellappan** and Ranjith, M.T. 2019. *Neelakkaozhi- Nelkrishikkoru Puthiya Bheeshani* (Malayalam) (Released during the AINPVPM Annual group meeting held at PJTSAU, Hyderabad)

#### **f. Publication - Monograph/Manual**

**Mani Chellappan**, Ranjith, M.T. and Chaudhary, V. 2023. Manual on field ornithology. AINP on VPM, KAU. 83p. (Released during the AINPVPM Annual group meeting held at PJTSAU, Hyderabad)

**Mani Chellappan, Berin Pathrose and Shanaz 2021.** Manual on forest Entomology. 72p.

#### **g. Publication Books**



**Mani Chellappan** and Ranjith, M.T. 2022. Birds of Agricultural Landscape in Kerala. Directorate of Extension, Kerala Agricultural University. 131p. (Released during the Golden Jubilee celebration of KAU)

#### **h. Publication – Research Thesis**

Abhishek, V., **Mani Chellappan (Guide)**, 2021. Microbial diversity in hive-stored pollen of indian honey bee, *Apis cerana indica* (Fabricius). M.Sc Thesis submitted to Kerala Agricultural University. 93 p.

Anusree Padmanabhan P. S., **Mani Chellappan (Guide)**, 2023. Pollination ecology of solitary pollen bees. PhD Thesis submitted to Kerala Agricultural University. 143 p.

Arya, S, **Mani Chellappan (Guide)**, 2021. Characterization of intestinal microbiome of Rattus species. Thesis submitted to Kerala Agricultural University. 109p.

Bindu G.R., **Mani Chellappan (Guide)**, 2024. Characterization of microbiota associated with Stingless Bee *Tetragonula travancorica* Shanas And Faseeh (Hymenoptera: Apidae: Meliponinae) and its pollen. Ph.D. Thesis submitted to Kerala Agricultural University. 180 p.

Rahul raj., **Mani Chellappan (Guide)**, 2021. Antifeedant and growth regulatory activity of *Sphagneticola trilobata*(L) Pruski on tobacco caterpillar, *Spodoptera litura* (Fab)(Lepidoptera: Noctuidae). M.Sc Thesis submitted to Kerala Agricultural University. 55 p

Sanjay Sabu, **Mani Chellappan (Guide)**, 2023. Temperature-induced changes in the biology and heat shock protein gene expression in malathion-resistant red flour beetle, *Tribolium castaneum* (Herbst) (Coleoptera: Tenebrionidae). M.Sc Thesis submitted to Kerala Agricultural University. 49 p.

Thanu, C. N., **Mani Chellappan (Guide)**, 2024. Diversity and ecology of the blue banded bees, *Amegilla* spp (Hymenoptera: Apidae). M.Sc Thesis submitted to Kerala Agricultural University. 83 p.

Vineetha V, **Mani Chellappan (Guide)**, 2023. Insecticide tolerance in stingless bee, *Tetragonula iridipennis* Smith (Hymenoptera: Apidae: Meliponini). Ph.D. Thesis submitted to Kerala Agricultural University. 169 p.

#### **International Trainings/Seminars/ Conferences attended**

1. International Barcode of Life, Kruger, Johannesburg, South Africa 2017
2. Indo-Australian workshop on Stingless bee pollinators – Sydney, November, 2016

3. Indo- Australian workshop on honey bees and pollinators – New Delhi, May, 2016
4. International training programme on small mammals – Kerala, 2009

**Professional Affiliation**

1. Life member, Entomological society of India
2. Life member, Association for the Advancement of Entomology
3. Life member, Society for Applied Ornithology
4. Life member, Society for Biocontrol Advancement

**Technologies generated**

1. Classical bio control of papaya mealybug
2. Nesting design for dammer bee
3. Bio bird repellent
4. Peafowl fence
5. TNet
6. Automatic cracker station
7. Reflective ribbon cutter
8. Rotary avian blind
9. Bird nesting designs
10. LED light bird scarer
11. DeeRep
12. Nylon net based wild boar fence
13. BoRep
14. Solar electric multi fencing system
15. Rodent cake applicator
16. Sensor based wild boar sonic scarer
17. Holographic reflective ribbon
18. Introduction of barn owl as rodent biocontrol agent in Lakshadweep islands

**Patents filed - 5**

**Official address**

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