

CURRICULUM VITAE

PERSONAL DETAILS

Name : Dilipkumar Masilamany
Gender : Male
Nationality : Malaysia
Race : Indian
Religion : Hindu
Position : Senior Research Officer
Institution : Malaysian Agricultural Research and Development Institute (MARDI)
Address : Rice Research Centre, MARDI Seberang Perai, 13200 Kepala Batas, Pulau Pinang
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EDUCATIONAL DETAILS

Degree : Doctor of Philosophy (Weed Science)
Institution : Universiti Malaysia Terengganu (UMT)
Thesis : Sustainable weedy rice management in Clearfield® rice system

Degree : Master of Science (Weed Science)
Institution : Universiti Malaysia Terengganu (UMT)
Thesis : Phytotoxic activity of pre-emergent herbicides in combination with sunflower leaf extracts on barnyardgrass (*Echinochloa crus-galli*) in direct seeded rice

Degree : Bachelor of Science (Post-harvest Technology)
Institution : Universiti Malaysia Terengganu (UMT)
Thesis : Antifungal studies of lemongrass (*Cymbopogon citrates* L.) as an alternative strategy to control post-harvest fungal causing anthracnose of papaya (*Carica papaya* L.)

AREAS OF EXPERTISE

Research interest : Weed science
h-index : 5
Citations : 78

PUBLICATIONS

Journal

- Dilipkumar, M.**, Ng, L.C., Chuah, T.S. and Chauhan, B.S. 2021. PRE and POST control of weedy rice and selected rice weeds with premix of imazapic and imazapyr at different ratios. Australian Journal of Crop Science (in press).
- Dilipkumar, M.**, Ahmad-Hamdani, M.S., Rahim, H., Chuah, T.S. and Burgos, N.R. 2021. Survey on weedy rice (*Oryza sativa*) management practice and adoption of Clearfield rice technology in Peninsular Malaysia. Weed Science, doi <https://doi.org/10.1017/wsc.2021.16>.
- Yean, R.A., **Dilipkumar, M.**, Rahman, S. and Song, B.K. 2021. Resistance mechanism in weedy rice: Target site and non-target site both play important role in Malaysian IMI resistance weedy rice. International Journal of Molecular Science 22: 982.
- Dilipkumar, M.**, Muhamad Amirul, N., Norhafizah, M.Z., Ismail, S. and Chuah, T.S. 2020. Phytotoxic activity of oil palm frond mulch in combination with selected pre-emergence herbicides. Sains Malaysiana 49(10): 2403–2410.
- Muhamad Amirul, N., **Dilipkumar, M.** and Chuah, T.S. 2019. Different imazethapyr placements and rainfall amounts affect phytotoxic activity of imazethapyr in combination with oil palm frond residue mulches against common weeds in landscapes. Sains Malaysiana 48(3): 581–588.
- Dilipkumar, M.**, Muhamad Amirul, N., Ismail, S. and Chuah, T.S. 2019. Effects of imazethapyr treated oil palm frond residue mulch on weed control and ornamental plant quality in nurseries. Indian Journal of Horticulture 76(1): 148–154.
- Dilipkumar, M.**, Erwan, S.S., Anuar, A. and Sivapragasam, A. 2018. A sex pheromone-baited trapping system for management of sweetpotato weevil, *Cylas formicarius* (Coleoptera: Brentidae). Journal of Applied Entomology, Doi: 10.1111/jen.12602.
- Dilipkumar, M.**, Burgos, N.R., Chuah, T.S. and Ismail, S. 2018. Cross-resistance to imazapic and imazapyr in a weedy rice (*Oryza sativa*) biotype found in Malaysia. Planta Daninha, Doi: 10.1590/S0100-83582018360100058.
- Dilipkumar, M.**, Chuah, T.S., Goh, S.S. and Ismail, S. 2017. Weed management issues, challenges, and opportunities in Malaysia. Crop Protection, Doi: 10.1016/j.cropro.2017.08.027.
- Dilipkumar, M.**, Mazira, C.M. and Chuah, T.S. 2017. The potential use of oil palm frond mulch treated with imazethapyr for weed control in Malaysian coconut plantation. Sains Malaysiana 46(8): 1171–1181.

- Dilipkumar, M.,** Mazira, C.M. and Chuah, T.S. 2017. Evaluation of sequential application of slashing and glyphosate for drought grass (*Ischaemum muticum* L.) control in coconut plantation. *he Journal of Animal & Plant Sciences*, 27(1): 200-206.
- Dilipkumar, M.,** Ahadiyat, A., Masan, P. and Chuah, T.S. 2015. Mites (Acari) associated with *Rhynchophorus ferrugineus* (Coleoptera: Curculionidae) in Malaysia, with a revised list of the mites found on this weevil. *Journal of Asia-Pacific Entomology*, 18: 169-174.
- Dilipkumar, M.,** Mazira C.M. and Chuah, T.S. 2015. Phytotoxicity of different organic mulches on emergence and seedling growth of goosegrass (*Eleusine indica*). *Journal of Tropical Agriculture and Food Science*, 43(2): 145 – 153.
- Dilipkumar, M.** and Chuah, T.S. 2013. Allelopathic effects of sunflower leaf extracts and selected pre-emergence herbicides on barnyardgrass. *Journal of Tropical Agriculture and Food Science*, 41(2): 309-318.
- Dilipkumar, M.** and Chuah, T.S. 2013. Is combination ratio an important factor to determine synergistic activity of allelopathic crop extract and herbicide? *International Journal of Agriculture and Biology* 15: 259-265.
- Dilipkumar, M.,** Adzemi, M.A. and Chuah, T.S. 2012. Effects of soil types on phytotoxic activity of pretilachlor in combination with sunflower leaf extracts on barnyardgrass (*Echinochloa crus-galli*). *Weed Science*, 60: 126-132.
- Dilipkumar, M.** and Chuah, T.S. 2011. Biology of barnyardgrass (*Echinochloa crus-galli*): A review. *Annals of Zizaniology*, 1: 12-17.

Book/Book Chapter

- Dilipkumar, M.,** Kumar, V., Song, B.K., Olsen, K.M., Chuah, T.S., Ahmed, S. and Qiang, S. 2021. Weedy rice (*Oryza* spp.). *Worlds' problematic weed species*. Elsevier, New York. (in press).
- Dilipkumar, M.,** Badrulhadza, A., Mohd Khusairy, K., Mohd Shahril, F.A.R., Chong T.V. dan Chuah, T.S. 2020. *Manual Teknologi Kawalan Padi Angin*. MARDI, Selangor, Malaysia. p. 1-16.
- Dilipkumar, M.,** Song, B.K., Ting, X.N., Chuah, T.S. and Asfaliza, R. 2019. CHAPTER 14: Weedy rice (*Oryza sativa* L.) (English Name: Weedy rice; Malay Name: Padi angin). In: *Invasive Weeds of Malaysia and Their Sustainable Management* (ed. Rezaul Karim, S.M., Abdul Shukor, J., Rao, A.N., **Dilipkumar, M.**, Laila, N., Muhammad Shakirin, M. and Norhafizah, M.Z.), Universiti Putra Malaysia, Selangor, Malaysia. p. 202-214.
- Abdul Aziz, A.M., Chan, C.S., **Dilipkumar, M.**, Erwan Shah, S., NurAtiqah, M.K. dan Noorsuhaila, A.B. 2019. Bab 5: Amalan Agronomi, dalam *Laporan Khas Potensi Penanaman Jagung Bijian di Malaysia: Pengalaman MARDI*. p. 20-26.
- Rosnani, A.G. et al. 2017. *Manual teknologi pengeluaran ubi keledek ungu anggun*. MARDI, Serdang, Malaysia. ISBN 978-967-936-655-6 (co-author).

Popular writing

- Dilipkumar, M.** 2018. Save the Clearfield® rice technology. Scientia MARDI March 2018, page 9.
- Erwan, S.S. dan **Dilipkumar, M.** 2017. Paku rawan kebal racun. Agromedia khas PADI 2017, 28-29.
- Noorhayati, M.D. dan **Dilipkumar, M.** 2017. Selamatkan teknologi padi Clearfield. Agromedia khas PADI, 30-31.
- Dilipkumar, M.**, Anis Fadzilah, M.A. and Azimah, A.K. 2016. Pengurusan bersepadu rumput miang mexico di Malaysia. Buletin Teknologi MARDI, 10: 9-16.
- Dilipkumar, M.**, Song, B.K. and Chuah, T.S. 2016. Current status of Clearfield rice technology in Malaysia. Asian Pacific Weed Science Society Newsletter, 6(2): 4.
- Dilipkumar, M.** 2016. Awas!!! Rumput Miang Mexico. Agromedia, 46: 12-13.
- Dilipkumar, M.** dan Erwan, S.S. 2015. Pengurusan bersepadu kumbang belalai – perosak utama tanaman ubi keledek. Buletin Teknologi MARDI, 7: 43-49.
- Dilipkumar, M.** dan Firdaus M.A. 2014. Serangan kumbang belalai – barah tanaman ubi keledek. Agromedia. 44: 43.
- Dilipkumar, M.** 2013. Kumbang jalur merah - perosak tersembunyi. Agromedia 39: 50-51.
- Dilipkumar, M.** dan Firdaus, M.A. 2013. Kumbang jalur merah – pengangkutan percuma untuk kutu foresi. Agromedia. 41: 58.
- Dilipkumar, M.** dan Tang, S.B. 2013. Pengurusan bersepadu kumbang badak dan kumbang jalur merah – perosak utama tanaman kelapa. Buletin Teknologi MARDI, 4: 50-59.
- Dilipkumar, M.**, Wan Khairul, A.W.A. dan Razali, B. 2012. Biologi dan pengurusan kumbang jalur merah – perosak invasif tanaman kelapa. Buletin Teknologi MARDI, 1: 151-157.

Conference/Symposium

- Dilipkumar, M.** George, T.V., Zuhair, Z.A. and Chuah, T.S. 2019. Effects of imidazolinone formulation, application rate and application timing on control of weedy rice and selected weed species in Clearfield® rice system. In: Asian Pacific Weed Science Society Conference, 3-6 September 2019, Kuching, Malaysia, pp. 82.
- Dilipkumar, M.**, Erwan, S.S. Anuar, A. and Sivapragasam, A. 2018. Development of a sex pheromone-based trapping system for management of sweetpotato weevil in Malaysia. In: 10th International Conference on Plant Protection in the Tropics, 6-8 August 2018, Melaka, Malaysia, pp 30.
- Dilipkumar, M.**, Lee, L.C. and Chuah, T.S. 2018. Effective method to control weedy rice in direct-seeded rice culture. In: 5th International Rice Congress, 15-17 October 2018, Marina Bay Sands, Singapore, pp. 145.
- Dilipkumar, M.** dan Noorhayati, M.D. 2017. Evolusi padi angin rintang terhadap racun imidazolinone di Malaysia. Persidangan Padi Kebangsaan, 26-28 September, Dorsett Grand Subang, Selangor, Malaysia, pp. 322-325.

- Dilipkumar, M.** George, T.V., Zuhair, Z.A., Burgos, N.R. and Chuah, T.S. 2017. Confirmation of imidazolinone-resistant weedy rice (*Oryza sativa*) in Malaysia. In: Asian Pacific Weed Science Society Conference, 19-22 September 2017, Kyoto, Japan, pp. 120.
- Wan Khairul Anuar, W.A., Azlan Azizi, M.N., Badrulhadza, A., **Dilipkumar, M.**, Mazidah, M., Mohd Nazri, B., Nor Ahya, M., Norma, H., Norziana, Z.Z. and Tang, S.B. 2017. Pest and disease management studies of coconut In MARDI. In: Research Consultation Programme (RCP) on Coconut Research and Development, 18-20 April 2017, Grand Court Hotel Teluk Intan, Perak Malaysia.
- Erwan, S.S., **Dilipkumar, M.**, Mohd Fitri, M. and Mazidah, M. 2017. Current status of biofertilizers and biopesticides usage in Malaysia. In: 2nd International Conference Biofertilizers & Biopesticides 8-11 August 2017, Taichung Taiwan.
- Azmi, M., George, T.V., Alex, T., Kevin, C., **Dilipkumar, M.** Weston, B. 2017. Sustainability of the Clearfield® production system for rice in Malaysia. 2017. In: Asian Pacific Weed Science Society Conference, 19-22 September 2017, Kyoto, Japan, pp. 107.
- Anis Fadzilah, M.A., **Dilipkumar, M.**, Muhammad Saiful, A. H. and Azimah, A.K. 2016. Germination and growth responses of *Parthenium hysterophorus* in different soil textures and burial depths. In: 9th International Conference on Plant Protection in the Tropics, 3-5 August 2016, Kuching, Sarawak.
- Dilipkumar, M.**, Mazira, C.M. and Chuah, T.S. 2015. Residue of oil palm frond mulch as slow-release carriers for herbicide. In: 25th Asian-Pacific Weed Science Society Conference, 13-16 October 2015, Hyderabad, India, pp. 89.
- Sharif, H., Zainal, A.H., Asfaliza, R., **Dilipkumar, M.**, Kogeethavani, R., Maisarah, M.S. and Allicia, A.J. 2015. Intensification of rice technology generation to support 100% SSL. In: NAPiCEX 2015, Rice Industries Towards 100% SSL, 28-30 September 2015, The Magellan Sutera Resort, Kota Kinabalu, Sabah, Malaysia.
- Dilipkumar, M.** and Sivapragasam, A. 2014. Spatial distribution of *Rhynchophorus* sp. based on coconut variety and location from the seashore in Kelantan, Malaysia. In: The 46th APCC Cocotech Meeting and Coconut Festival, 7-11th July 2014, Colombo, Sri Lanka.
- Erwan, S.S., Nurul, N.M.I., Wan, Z.W.M., **Dilipkumar, M.**, Zaharah, C.M. 2014. Evaluation of purple sweet potato accession yield and growth on bris soil at varying level of inorganic fertilizer and interplant distance. In: The Soil Science Conference of Malaysia, 8-10 April 2014, Putra Palace, Kangar, Perlis, Malaysia.
- Dilipkumar, M.**, Mazira, C.M. and Chuah, T.S. 2013. Phytotoxic potential of different crop residues on control of goosegrass (*Eleusine indica*). In: Universiti Malaysia Terengganu Annual Symposium (UMTAS), 8-10 October 2013, Terengganu, Malaysia, pp. 181-182.
- Dilipkumar, M.**, Erwan Shah, S. and Thiyagu, D. 2013. Hormetic effect of selected crop debris on emergence and growth on *Phyllanthus niruri*. In: 5th Global summit on medicinal and aromatic plants. 8-12 Disember 2013, Miri, Sarawak, Malaysia.
- Chuah, T.S. and **Dilipkumar, M.** 2013. Effects of oil palm rachis residues in combination with pretilachor on goosegrass (*Eleusine indica*) grown with chinese spinach (*Amaranthus*

- oleraceus*). In: The 24th Asian-Pacific Weed Science Society Conference, 22-25 October 2013, Bandung, West Jawa, Indonesia, pp. 147.
- Thiyagu, D., Wan Zaki, W.M., **Dilipkumar, M.** and Erwan Shah, S. 2013. Preliminary evaluation of ten mas cotek (*Ficus deltoide*) accession on bris soil. In: 5th Global summit on medicinal and aromatic plants. 8-12 Disember 2013, Miri, Sarawak, Malaysia.
- Erwan Shah, S., Wan Zaki, W.M., **Dilipkumar, M.**, Thiyagu, D. and Zahara, C. H. 2013. Effect of organic and inorganic fertilizers on the growth and yield of butterfly pea (*Clitoria ternatea*) on polybag. In: 5th Global summit on medicinal and aromatic plants. 8- 12 Disember 2013, Miri, Sarawak, Malaysia.
- Dilipkumar, M.** and Sivapragasam, A. 2012. Distribution and abundance of phoretic mites on adult red stripe weevil (*Rhynchophorus vulneratus*). In: International Symposium on Insect (ISoI), 3-5 December 2012, Mines Wellness, Selangor, Malaysia.
- Dilipkumar, M.** 2012. Evaluation of commercial pheromone lures and trap locations for controlling red stripe palm weevil (*Rhynchophorus vulneratus*) in coconut ecosystem. In: 5th IPM Symposium, 18-20 December 2012, Sabah, Malaysia.
- Dilipkumar, M.** and Chuah, T.S. 2011. Phytotoxicity of sunflower leaf extracts in combination with pretilachlor on barnyardgrass (*Echinochloa crus-galli*). In: Malaysian Plant Protection Society Seminar (MAPPS), 8 December 2011, Putrajaya, Malaysia.

RESEARCH ACHIEVEMENT

Honors and Awards

- Silver medalist, International Trade Fair Ideas Inventions New Products (iENA Germany) 2019. Invention title: ClearWR[®]: Sustainable method to control weedy rice.
- Gold medalist, ITEX 2019. Invention title: CFTrap[®]: A cost effective method to control sweet potato weevil.
- Gold medalist, Malaysian Technology Expo (MTE) 2019. Invention title: ClearWR[®]: Sustainable method to control weedy rice.
- Young Scientist MARDI 2018.
- Best of the Best Award. MARDI Science and Technology Expo (MSTE) 2018. Invention title: ClearWR[®]: Sustainable method to control weedy rice.
- Best young scientist for knowledge category. MARDI Science and Technology Expo (MSTE) 2018. Invention title: ClearWR[®]: Sustainable method to control weedy rice.
- Best award for knowledge category. MARDI Science and Technology Expo (MSTE) 2018. Invention title: ClearWR[®]: Sustainable method to control weedy rice.
- Most Significant Knowledge Award. MARDI Science and Technology Expo (MSTE) 2018. Invention title: ClearWR[®]: Sustainable method to control weedy rice.
- Gold medalist (knowledge category), MARDI Science and Technology Expo (MSTE) 2018. Invention title: ClearWR[®]: Sustainable method to control weedy rice.

- Gold medalist (knowledge category), MARDI Science and Technology Expo (MSTE) 2018. Invention title: CFTrap[®]: A cost effective method to control sweet potato weevil.
- Silver medalist, Malaysian Technology Expo (MTE) 2015. Invention title: OP Plus[™]: Novel mulch with slow release herbicide.
- Gold medalist, Convention KIK 2014. Invention title: BC Trim.
- Gold medalist, Malaysian Agricultural Innovation Challenge (MAGIC) 2014. Invention title: OP Plus[™]: Novel mulch with slow release herbicide.
- Gold medalist, MARDI Science and Technology Expo (MSTE) 2014. Invention title: OP Plus[™]: Novel mulch with slow release herbicide.
- Young Scientist MARDI 2012.
- Gold medalist (knowledge category), MARDI Science and Technology Expo (MSTE) 2012. Project title: Is combination ratio an important factor to determine synergistic activity of herbicide mixture?

Project Grants

- **Project leader:** MARDI-BASF collaboration project on the development of local rice variety tolerant to the imidazolinone herbicide. Funded by BASF (M) Sdn Bhd, R-RI240-0903 (2017-2020). Funded amount RM 850,000.
- **Project leader:** Verification on the efficacy of herbicides, fungicides, rodenticide and insecticides to control pests, diseases and weeds in Malaysian rice cultivation. Funded by Agricultural Chemicals (M) Sdn Bhd, NRIB01 (2018-2019). Funded amount RM 195,000.
- **Project leader:** Potential of Revolt13.0EC[®] (oxadiazon) to control weedy rice and general weeds in direct seeded rice system. Hextar R&D International Sdn Bhd, NRSB05 (2017-2019). Funded amount RM 130,800.
- **Project leader:** Effects of herbicides and environmental factors on germination and seedling growth of *Parthenium hysterophorus*. Funded by Malaysian Agricultural Research and Development Institute (MARDI), J-TI044 (2015-2017). Funded amount RM 35,000.
- **Project leader:** Pest and disease management package for new inbred rice varieties. Funded by Ministry of Agriculture and Agro-based Industry, P-RI198-0306 (2013-2015). Funded amount RM 1,500,000.
- **Project leader:** Innovative weed management strategy in coconut farm. Funded by Ministry of Agriculture and Agro-based Industry, P-RI198-0306 (2013-2014). Funded amount RM 60,000.
- **Project leader:** Major pest and disease management package for sweet potato production. Funded by Ministry of Agriculture and Agro-based Industry, P-RI245-0306 (2013-2014). Funded amount RM 75,000.
- **Project leader:** Spatial distribution of *Rhynchophorus* sp. based on coconut variety and location from the seashore in Kelantan. Funded by Malaysian Agricultural Research and Development Institute (MARDI), J-JI353-0306 (2012-2013). Funded amount RM 55,000.

- **Project collaborator:** Collaboration of MARDI-BASF on development of ACCase tolerant hybrid rice variety, agronomic packages, and stewardship guidelines. Funded by BASF (M) Sdn Bhd, R-RI240-0903 (2019-2027). Funded amount RM 2,690,000.
- **Project collaborator:** Patterns, fitness and mechanisms of resistance to imidazolinone, and growth responses to various herbicides in Malaysian weedy rice populations. Ministry of Education Malaysia, FRGS/1/2018/WAB01/UPM/02/1 (2019-2021). Funded amount RM 118,000.
- **Project collaborator:** Development of the Malaysian herbal monograph project. Funded by Ministry of Agriculture and Agro-based Industry, K-RINB3-0306 (2012-2013). Funded amount RM 130,000.

Intellectual Property Rights

- A composition and a process for inhibiting weed growth and emergence. Patent granted MY-172415-A (main inventor).
- Standard Operation Procedure (SOP) ClearWR™. Copyright filled CR2019/06/03 (main inventor).

Commercialization

- New rice variety MARDI (MARDI Siraj 297) – public goods
- New rice variety MARDI (MARDI Wangi 88) – public goods
- New rice variety MARDI (MR303) – public goods
- New rice variety MARDI (MR307) – public goods

External Reviewer/Editorial

- Associate Editor Journal of Tropical Agriculture and Food Science
- Reviewer for Canadian Journal of Plant Science
- Reviewer for Planta Daninha
- Reviewer for Sains Malaysiana
- Reviewer for Journal of Integrative Agriculture
- Reviewer for International Journal of Agriculture Sciences
- Reviewer for Weed Biology and Management
- Reviewer for Weed Science

Student Advisory

- Co-supervisor for MSc student from Universiti Malaysia Terengganu 2013-2015
- Co-supervisor for MSc student from Universiti Putra Malaysia 2015-2017
- Co-supervisor for MSc student from Universiti Malaysia Terengganu 2017-2019
- Co-supervisor for MSc student from Universiti Putra Malaysia 2017-2019

Professional Associations

- Asian Pacific Weed Science Society (member) since 2015
- Malaysian Plant Protection Society (member) since 2017