



Department of Soil Science,
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PERSONAL INFORMATION

Name in Full: Warshi Shamila Dandeniya
Date of Birth: December 17, 1980

EMPLOYMENT

Professor in Soil Science at University of Peradeniya, Sri Lanka
29th March 2021 – Present
Senior Lecturer in Soil Science at University of Peradeniya, Sri Lanka
8th August 2012 – 28th March 2021
Lecturer in Soil Science at University of Peradeniya, Sri Lanka
6th August 2007 – 7th August 2012
**Assistant lecturer at the Department of Soil Science, Faculty of
Agriculture, Peradeniya, Sri Lanka**
May 2005 – August 2007

RESEARCH INTERESTS

Formulation of biofertilizers to reduce synthetic fertilizer requirement in rice and vegetable farming
Development of nitrification inhibitors to improve nitrogen fertilizer use efficiency in cropping systems
Study the diversity of soil microbial communities in forests using metagenomics approach
Investigate the spread of antibiotic resistance development in the environment due to usage of antibiotics in agriculture
Understand the effects of agricultural practices on soil microbial communities using tools in microbial ecology and genomics
Improve carbon sequestration in marginal agricultural soils in Sri Lanka

EDUCATIONAL QUALIFICATIONS

PhD. Cornell University, USA (Soil science)
Major field: soil science Minor fields: Microbiology, Crop Science
December 2010
Dissertation: Water-saving Rice Farming Affects Nitrifiers in Soil
M Phil. University of Peradeniya, Sri Lanka (Soil Science)
August 2007
Thesis: Diversity of microbial communities associated with rhizosphere of improved and traditional rice varieties grown in Sri Lanka
B.Sc. (Hons) University of Peradeniya, Sri Lanka (Agriculture): First class
March 2005

**TEACHING
EXPERIENCE****Undergraduate level courses**

University of Peradeniya

- Soil Resource and Ecosystem – SS 1101
- Properties and Functions of Soil – SS 1201
- Soil Fertility and Plant Nutrition – SS 2101
- Soil Microbiology – SS 3203
- Sustainable Soil Fertility Management – SS 3204
- Land Degradation and Conservation – SS 4102
- Scientific Research and Communication in Soil Science – SS 4104
- Research Techniques in Soil Science – SS 4106

University of Colombo

- Land Use and Environment – AG 4015

Postgraduate level courses

Postgraduate Institute of Agriculture, University of Peradeniya

- Fundamentals of Soil Science – SS 5101
- Soil Ecology – SS 5109
- Water Quality and Environment – SS 5156
- Environmental Microbiology – SS 5113
- Environmental Pollution and control – SS 5106
- Seminar – SS 5199
- Organic Pollutants and Environment – SS 5251
- Environmental Biotechnology – SS 5254

**PROFESSIONAL
QUALIFICATIONS**Coordinator/ Counselling and Career Guidance Unit of Faculty of
Agriculture, University of Peradeniya (2020- 2023)Head/ Department of Soil Science of Faculty of Agriculture, University of
Peradeniya (January, 2017 – December 2019)

The World Academy of Science (TWAS) Young Affiliate: 2017 - 2022

General Secretary (2021-2023), Vice-president (2018/2020 and
2015/2016) and an executive committee member (2011 to present) of
Soil Science Society of Sri LankaA member of FAO/WHO Roster of Experts for the Antimicrobial Resistance
(2018-2020)Secretary (2016-2018), a Board member (2014-present) and a teaching
panel member of the Board of Study in Soil Science of Postgraduate
Institute of Agriculture, University of Peradeniya, Sri Lanka.A member of Board of Management of Postgraduate Institute of
Agriculture, University of Peradeniya, Sri Lanka (2019-2022)General Secretary of the Alumni Association of Postgraduate Institute of
Agriculture 2018Serving as a senior student counselor at University of Peradeniya (2020-
present)Faculty representative to the programme committee of University Staff
Development Center (2016 to 2020)

Serving as representative from Faculty of Agriculture and Postgraduate Institute of Agriculture to the Self-Evaluation Report writing team targeting Institutional review of University of Peradeniya

Serving in various capacities at Faculty subcommittees (Curriculum Development Committee, English Language Teaching Committee, Student Welfare and Advisory Committee, Time-tabling Committee) to promote undergraduate education in Faculty of Agriculture, University of Peradeniya.

Member of Soil Science Society of America (2007 – present)

Member of Agronomy Society of America (2007 – present)

Participated as a subject matter expert in revision of B.Sc. Agriculture curriculum of Rajarata University of Sri Lanka (2020)

Participated at meetings of experts for the discussions on the status of Sustainable Nitrogen Management in Sri Lanka organized by the Ministry of Mahaweli Development and Environment, Sri Lanka and UNEP, at Colombo, Sri Lanka (2019).

Participated at interactive training workshop on Exploring opportunities for mainstreaming ecosystem based approaches into disaster risk reduction and climate change adaptation organized by IUCN, and UNEP, at Kandy, Sri Lanka (2019).

Participated at the Consultative Workshop on Developing an Approach to Estimate the Optimal Production Targets in Different Agro-Climatic Zones and Recommendations for Climate Resilient Agriculture organized by IUCN, at Dambulla, Sri Lanka (2019).

**SELECTED
CONTRIBUTIONS AS
COORDINATOR
AND/OR
RESOURCEPERSON
OF SYMPOSIA/
WORKSHOPS/
TRAINING
PROGRAMS**

Coordinator of Faculty of Agriculture Undergraduate Research Symposium (FAuRS) – 2021/22.

Coordinated a training session to the academic staff members of Faculty of Agriculture on “Responding to distress calls from students” on 16th September, 2022.

Coordinated and served as the resource person of a training session on “Good practices in conducting field experiments with biofertilizers” to 15 officers from the Lankem Ceylon PLC on 3rd November 2022 at University of Peradeniya.

Coordinated the Graphical Abstract Contest and two workshops on developing graphical abstracts to the undergraduates at the Faculty of Agriculture Undergraduate Research Symposium (FAuRS) – 2020 of University of Peradeniya, Sri Lanka.

Coordinator and a resource person of the workshop on “Presentation Skills Training: How to create and deliver high impact presentations” held on 6th to 7th November, 2020 as a pre-congress workshop organized in parallel to the 32nd PGIA Annual Congress of University of Peradeniya.

Coordinator of the “International Symposium on Sustainable Soil Management” in December-2019 at National Agriculture Information Communication Centre at Kandy.

Coordinated workshop on “Create awareness and obtain feedback on novel nitrogen and phosphorous biofertilizers developed for paddy

farming” in October 2019 at Rice Research and Development Institute at Bathalegoda, Sri Lanka.

Coordinated workshops on “Environmental Impact of Potentially Toxic Trace Elements in Soils” in 2013 and “Current trends of Crop Nutrient Management in Sri Lanka” in 2012 at University of Peradeniya.

Coordinator and a resource person of the workshop on “Current trends of Crop Nutrient Management in Sri Lanka” on 3rd December 2012 at University of Peradeniya.

Chaired Program Committees of 33rd and 34th Annual Congress events of Postgraduate Institute of Agriculture, University of Peradeniya.

Chaired the Registration Committee of Peradeniya University International Research Symposium-2019 at University of Peradeniya, Sri Lanka.

Resource person of the FAuRS-2020 and FAuRS 2021/22 online workshops on “Data presentation and visualization techniques”.

Resource person of the PGIA pre-congress workshop on “Writing a quality research paper: Tips and tricks” conducted on 31st July, 1st and 7th August 2020 at the PGIA in parallel to the 32nd PGIA Annual Congress of University of Peradeniya.

Resource person of the PGIA pre-congress workshop on “How to become a great peer reviewer” conducted on 22nd September 2020 at the Faculty of Agriculture, University of Peradeniya in parallel to the 32nd PGIA Annual Congress of University of Peradeniya.

Resource person of 2-day workshop on “Methods in water quality testing” organized by Geological Society of Sri Lanka and Department of Geology, University of Peradeniya from 18th to 19th June 2015.

Resource person of the “Certificate course on soil, plant, water and fertilizer analysis” conducted by the Board of Study in Soil Science of PGIA from 17th to 21st February 2014 at Faculty of Agriculture, University of Peradeniya.

Resource person of workshop on “Bio Organic Fertilizer” organized by the Colombo Commercial Fertilizers Pvt. Ltd. on 2nd March 2021 at Sri Lanka Foundation Institute, Colombo.

Resource person of training program on “Practical Agriculture: from known to unknown” organized by CIC Agribusiness Pvt. Ltd. and conducted by the Agriculture Education Unit of Faculty of Agriculture, University of Peradeniya on 26th November 2016 at CIC farm, Pelwehera.

Resource person of workshop on “Site specific nutrient management – way forward” held at Postgraduate Institute of Agriculture, University of Peradeniya on 23rd January, 2015.

Senior Academic Exhibitor participated at Nitro Innovation exhibition leading the exhibition stall of Faculty of Agriculture of University of Peradeniya and Presenter at Science-Policy-Political Dialogue at the Launch United Nations Global Campaign for Sustainable Nitrogen Management, 23rd to 24th October, 2019 at BMICH, Colombo.

Panel member in expert group discussion on promotion of site specific fertilizer application in Sri Lanka organized by the Rehabilitation of Degraded Agricultural Land project of the FAO on 3rd November 2020.

**EDITORIAL WORK
AND REVIEWS**

A member of the Editorial Board of The Journal of Agricultural Science, Cambridge University Press (2014 to 2021)

Reviewed manuscripts for the following journals:

- The Journals of Agricultural Science
- Catena
- European Journal of Soil Science
- Journal of Environmental Quality
- Tropical Agricultural Research and Extension
- Tropical Agriculturist
- Tropical Agricultural Research
- Canadian Journal of Microbiology
- Ceylon Journal of Science
- Open University of Sri Lanka Journal
- Journal of Engineering Technology of Open University of Sri Lanka
- Journal of National Science Foundation
- Soil Science Society of Sri Lanka Journal.

Joint Editor of Pera e-Agri Newsletter (2020)

Thesis examiner at Postgraduate Institute of Science and Postgraduate Institute of Agriculture of University of Peradeniya.

Reviewed abstracts for a number of local and international research symposia since 2011 to present.

**RESEARCH GRANTS
RECEIVED**

Deputy Principal Investigator and a team leader of Target Orient Research (TOR) project funded by National Research Council of Sri Lanka.

Principal Investigator: Dr. R.S. Dharmakeerthi

Amount: LKR, 49.9 million Duration: 2016 - 2021

Theme: Development of eco-friendly technologies to minimize inorganic fertilizer usage while maintaining adequate productivity and improving long term soil fertility

Principal Investigator of investigator driven research grant from National Research Council of Sri Lanka.

Title: Developing botanical nitrification inhibitors to reduce nitrogen fertilizer wastage in vegetable crop cultivation

Amount: LKR 3.4 million Duration: 2016 - 2020

Principal Investigator of small grant received by the Ministry of Mahaweli Development and Environment, Sri Lanka.

Title: The efficiency of carbon cycling and functional diversity of soil microorganisms and its relation to soil fertility in intensively cultivated vegetable-based cropping systems

Amount: LKR 0.11 million Duration: one year (2019)

Member of the research team of South Asia Nitrogen Hub (SANH) project funded by the Global Challenge Research Fund (GCRF) operating through the United Kingdom Center for Ecology and Hydrology (UKCEH).

Title: South Asian Nitrogen Hub (SANH) project of Sri Lanka on
“Sustainable nitrogen management in agricultural systems”
Amount: GBP 227,804 Duration: Three years (2021-2024)

Member of research team of the project funded by Sri Lanka Council for
National Agriculture Research Policy.
Theme: Development of detailed spatial inventory of soil phosphorus and
organic carbon stocks at sub-catchment scale
Team: Dr. W.A.U. Vitharana, **Dr. W.S. Dandeniya**, Dr. A.M.C.P.K.
Attanayake, Dr. W. Balasooriya
Amount: LKR 1.07 million Duration: 2017-2018

Principal Investigator of small grant received by the Ministry of Mahaweli
Development and Environment, Sri Lanka.
Title: The diversity of bacterial and fungal populations in soils as affected
by shifting cultivation in dry mixed evergreen forests
Amount: LKR 0.1 million Duration: one year (2016)

University research grant 2016
Title: Assessing the contribution of nitrification for fertilizer-N losses from
agricultural soils
Amount: LKR785,000 Duration: 2016-2020

University research grant - 2013
Title: Antibiotic resistant bacteria in poultry manure and intensively
cultivated Ultisols
Amount: LKR 76,000 Duration: 2013-2014

International Foundation for Science (IFS) Grant – 2012
Title: Resistance of Microbial Communities in Agricultural Soils to
Tetracycline Following Application of Poultry Manure
Amount: USD11,700 Duration 2012 - 2016

University Research Grant (University of Peradeniya) – 2011
Title: Evaluating the ability of rice to effectively suppress soil nitrification
Amount: LKR 75,000 Duration: 2011-2012

A co-investigator of World bank funded grant to support postgraduate
research in Sri Lanka: Higher Education for Twenty first Century – Quality
and Innovative Grants - Window 3 Amount: LKR 30 million Duration:
2012 to 2016
Project team: Prof. W.A.J.M. De Costa (Team Leader), Prof. S.P.
Indraratne, Dr. R.M. Fonseka, Dr. L.D.B. Suriyagoda, **Dr. W.S. Dandeniya**,
Dr. D.M. De Costa and Dr. K.S. Hemachandra
Theme: Climate resilience of upland cropping systems through adaptive
crop and soil management and appropriate integrated pest management

<p>STUDENT SUPERVISION</p>	<p>Major supervisor for following students: K.K.K. Nawarathna – Completed M.Phil. in February 2021 A.A. Mariaselvam – Completed MPhil in October 2015 E.M. Herath – Completed M.Phil. in January 2017</p> <p>Co-supervisor in thesis committee of following students: H.D.D. Perera - Continuing M.Phil. D.D.A.E. Hemamali – Continuing M.Phil. H.A.N. Upekshani – Continuing Ph.D. Y.P. Ranasinghe – Continuing Ph.D. J.A.S. Chathurika – Completed PhD in March 2016 D.M.S. Duminda – Completed Ph.D. in March 2018 R. Eeswaran – Completed M.Phil. in January 2018 R.P.U.I. Amarawansa Completed M.Phil. in October, 2020 D.K.R.P.L. Dissasnayaka - Completed M.Phil. in November 2022</p> <p>Directed study of ten students who enrolled for M.Sc. in Environmental Soil Science degree at Postgraduate Institute of Agriculture of University of Peradeniya Independent study of one student enrolled for M.Sc. at University of Kelaniya, Sri Lanka In addition, I have supervised more than twenty-five undergraduate students in their final year research projects.</p>
<p>RESEARCH PUBLICATIONS</p>	<p><u>Books and Book Chapters</u></p> <p>Dandeniya, W.S. (2020). Soil Biodiversity and Human Health. In: State of knowledge of soil biodiversity - Status, challenges and potentialities, Report 2020. FAO, ITPS, GSBI, CBD and EC. Rome, FAO. https://doi.org/10.4060/cb1928en</p> <p>Dandeniya W. and Caucci S. (2020). Composting in Sri Lanka: Policies, Practices, Challenges and Emerging Concerns. In: Organic Waste Composting through Nexus Thinking: Practices, Policies, and Trends (Eds. Hettiarachchi, H., Caucci, S., and Schwärzel, K.), (pp. 61-89). Springer, Cham.</p> <p>Marambe, B., Weerahewa, J., Dandeniya, W.S. (Eds.). Agricultural Research for Sustainable Food Systems in Sri Lanka, Volume 1: A Historical Perspective. Springer Singapore. DOI. 10.1007/978-981-15-2152-2.</p> <p>Marambe, B., Dandeniya, W.S. and Weerahewa, J. (2020). Agricultural Research for Sustainable Food Systems: Recommendations with Special Reference to Sri Lanka. In <i>Agricultural Research for Sustainable Food Systems in Sri Lanka</i> (pp. 389-394). Springer, Singapore.</p> <p>Weerahewa, J., Dandeniya, W.S. and Marambe, B. (2020). Food Systems in Sri Lanka: Components, Evolution, Challenges and Opportunities. In <i>Agricultural Research for Sustainable Food Systems in Sri Lanka</i> (pp. 1-11). Springer, Singapore.</p>

- Dandeniya, W.S.** and Dharmakeerthi, R.S. (2020). Integrated Plant Nutrient Management in Major Agricultural Soils of Sri Lanka: A Review of the Current Status and the Way Forward. In: *Agricultural Research for Sustainable Food Systems in Sri Lanka*, pp.213-238. Springer, Singapore.
- Dharmakeerthi R.S., Vitharana, U.W.A., **Dandeniya, W.S.** (Eds.) 2019. The proceedings of the International Symposium on Sustainable Soil Management (ISSSM-2019) at NAICC, Kandy, Sri Lanka on 5-6 December 2019. Soil Science Society of Sri Lanka. ISBN 978-955-8124-15-4
- Dharmakeerthi R.S., Vitharana, U.W.A., **Dandeniya, W.S.** (Eds.) 2019. The Souvenir Book of the International Symposium on Sustainable Soil Management (ISSSM-2019) at NAICC, Kandy, Sri Lanka on 5-6 December 2019. Soil Science Society of Sri Lanka.
- Dandeniya W.S.** (2014). Soil Microbiological Properties. In: Soil: Properties, Plant Nutrition and Sustainable Management. (Ed. Rajapaksha R.M.C.P.), pp 71-94. Nethwin Printers Pvt. Ltd. Kandy, Sri Lanka: [In Sinhalese] (ISBN 978-955-589-189-9)
- Dandeniya W.S.**, Rajapaksha R.M.C.P. and Jayakody A.S. (2014). The use of Chemical Fertilizers and Organic Fertilizers. In: Soil: Properties, Plant Nutrition and Sustainable Management. (Ed. Rajapaksha R.M.C.P.), pp 121-136. Nethwin Printers Pvt. Ltd. Kandy, Sri Lanka: [In Sinhalese], (ISBN 978-955-589-189-9)
- Dandeniya, W. S.** (2011). Effective Academic Advising for Student Success. In U. Jayasinghe & A. Jayaweera (Eds.), Teaching Learning Assessment and Skills Development in Higher Education: Concepts and Applications (426-431). Staff Development Center: Wayamba University of Sri Lanka.

Articles published in peer reviewed journals

- Dandeniya, W.S.**, Herath, E.M., Lowe, A.M., Kasinthar, M., Jinadasa, R.N., Vidanarachchi, J.K., & Samarakone, T.S. 2022. Antibiotic use in commercial broiler chicken farming and its consequential resistance development in root colonizing bacteria of carrot grown in manure applied soils in a middle-income country. *Canadian Journal of Soil Science*, 102(2): 319-329. <https://doi.org/10.1139/CJSS-2021-0001>.
- Bansal, S., Raghuram, N., Adhya, T.K., Rahman, M.M., Tshering, D., Dahal, K.R., Wakeel, et al. 2022. Long-term trends of direct nitrous oxide emission from fuel combustion in South Asia. *Environmental Research Letters*, 17(4), p.045028. <https://doi.org/10.1088/1748-9326/ac5cf7>
- Upekshani, H.A.N., Dharmakeerthi, R.S., Weerasinghe, P. and Dandeniya, W.S., 2023. Comparative Assessment of Soil Chemical Characteristics in Two Contrasting Vegetable Cultivation Systems of Sri Lanka. *Tropical Agricultural Research*, 34(1), pp.15-30.
- Wickramaarachchi, W.A.M.S. & **Dandeniya, W.S.** 2022. Cellulose decomposition potential of soil as affected by vegetable cultivation: A case study in Kegalle District, Sri Lanka. *Tropical Agricultural Research*, 33(1): 1-8.

- Dandeniya, W.S.**, Wijerathna, Y.U.C., Palihakkara, P.D.B.J., & Mithrasena, Y.J.P.K. 2022. Soil microorganisms increase mobility of iron to rice (*Oryza sativa*, L.) plants. *Tropical Agricultural Research*, 33(1): 29-39.
- Nawarathna, K. K., **Dandeniya, W. S.**, Dharmakeerthi, R. S., & Weerasinghe, P. 2021. Evaluating the nitrification inhibition potential of selected botanicals and their non-target effects. *Canadian Journal of Soil Science*, e-First <https://doi.org/10.1139/cjss-2021-0072>.
- Nawarathna, K. K. K., **Dandeniya, W. S.**, Dharmakeerthi, R. S., & Weerasinghe, P. 2021. Vegetable Crops Prefer Different Ratios of Ammonium-N and Nitrate-N in the Growth Media. *Tropical Agricultural Research*, 32(1): 95-104.
- Herath, H. M. L. V., Jayasinghe-Mudalige, U. K., Silva, A. P., Jayakodi, J. A. S. N. S., Jayathilake, H. A. C. K., Dharmakeerthi, R. S., & **Dandeniya, W. S.** 2021. An Empirical Investigation into the Policy Instruments to Promote Eco-friendly Technologies Replacing Chemical Fertilizer Use in Paddy Farming in Sri Lanka. *Sri Lanka Journal of Technology*, 35(1): 18-22.
- Silva, A.P., Jayasinghe-Mudalige, U.K., Dharmakeerthi, R.S., Dandeniya, W.S., Balasooriya, B.L.W.K. 2020. Introducing eco-friendly technologies to reduce chemical fertilizer usage in paddy farming in Sri Lanka. *Sri Lanka Journal of Economic Research*. 7(2): 1-23.
- Hemamali, D.D.A.E., Vitthana, U.W.A., Attanayake, C.P., **Dandeniya, W.S.**, Balasooriya, B.L.W.K. 2020. Impact of agricultural land-use on soil organic carbon sequestration at sub-catchment scale. *Tropical Agricultural Research*. 31(1): 13-20.
- Chathurika, J.A.S., Kumaragamage, D., Indraratne, S.P, **Dandeniya, W. S.** 2019. Improving soil carbon pool, soil fertility, and yield of maize (*Zea mays* l.) of low-fertile tropical alfisols by combining fertilizers with slow-decomposing organic amendments. *Journal of Agricultural Science*. 157(1): 45-54.
- Chandrasiri, N. A. K. R. D., U. K. Jayasinghe-Mudalige, R. S. Dharmakeerthi, **W. S. Dandeniya** and D. V. S. S. Samarasinghe, 2019. Adoption of Eco-Friendly Technologies to Reduce Chemical Fertilizer Usage in Paddy Farming in Sri Lanka. *Journal of Agriculture & Value Addition*. 1(1):19-30.
- Nawarathna, K.K.K., **Dandeniya, W.S.**, Dharmakeerthi, R.S., Priyantha, P. 2019. Dynamics of nitrifiers in soils of intensively vegetable cultivated areas in Sri Lanka. *Tropical Agricultural Research*. 30(3): 5-68. DOI: <http://doi.org/10.4038/tar.v30i3.8319>.
- Upekshani, H.A.N., Dharmakeerthi, R.S., Weerasinghe, P., **Dandeniya, W.S.** 2018. Fertilizer usage and land productivity in intensively cultivated vegetable farming systems in Sri Lanka: an analysis based on a questionnaire survey. *Tropical Agricultural Research*. 30(1): 44-55. DOI: <http://doi.org/10.4038/tar.v30i1.8277>.
- Amarawansa, R.P.U.I., Balasooriya, B.L.W.K., **Dandeniya, W.S.**, Suganthan, B. and Dasanyaka, T. 2018. Identification of Cyanobacteria Inhabiting Paddy Fields in Intermediate Zone and Dry Zone of Sri Lanka. *Tropical Agricultural Research*. 29(4): 320-329.

- Dissanayake, D. K. R. P. L., Dharmakeerthi, R.S., Karunarathna, K.A., **Dandeniya, W.S.** 2018. Changes in structural and chemical properties of rice husk biochar co-pyrolised with Eppawala rock phosphate under different temperatures. *Tropical Agricultural Research*. 30. 19. 10.4038/tar.v30i1.8275.
- Chathurika, J.S., Kumaragamage, D., Zvomuya, F., Akinremi, O.O., Flaten, D.N., Indraratne, S.P. and Dandeniya, W.S., 2016. Woodchip biochar with or without synthetic fertilizers affects soil properties and available phosphorus in two alkaline, chernozemic soils. *Canadian journal of soil science*, 96(4), pp.472-484.
- Chathurika, J.A.S., Indraratne, S.P, **Dandeniya, W. S.** and Kumaragamage, D. (2015). Beneficial Management Practices on Growth and Yield Parameters of Maize (*Zea mays*) and Soil Fertility Improvement. *Tropical Agricultural Research*. 27 (1): 59-74.
- Herath, E.M., Palansooriya, A.G.K.N., **Dandeniya, W.S.**, Jinadasa, R.N. 2016. An assessment of antibiotic resistant bacteria in poultry litter and agricultural soils in Kandy District, Sri Lanka. *Tropical Agricultural Research*. 27(4): 389-398.
- Eswaran, R., De Costa, W.A.J.M., De Costa, D.M., **Dandeniya, W.S.**, Sivakumar, S. and Suriyagoda, L.D.B., 2016. Evaluation of a climate change-adaptive, eco-friendly agronomic package for potato (*Solanum tuberosum* L.) cultivation in the farmer fields of the Jaffna district of Sri Lanka. *Tropical Agricultural Research*, 27(2). pp. 190-202.
- Mariaselvam, A.A., **Dandeniya, W.S.**, Indraratne, S.P. Dharmakeerthi, R.S. 2016. Beneficial Nutrient Management Practice for Improving Maize (*Zea mays*) Yield in a Tropical Entisol. *Tropical Agricultural Research*. 27(2): 147-158.
- Dandeniya, W.S.** 2014. The response of selected rice varieties to partial nitrate nutrition and their ability to suppress nitrification. *Journal of Soil Science Society of Sri Lanka*. 24: 9-14.
- Vasujini, P., **Dandeniya, W.S.**, Dharmakeerthi, R.S. 2014. Assessing the quality of biochar produced from coconut husk waste. *Journal of Soil Science Society of Sri Lanka*. 24. 21-28.
- Herath, E.M. **Dandeniya, W.S.**, Samarasinghe, A.G.S.I., Bandara, T.P.M.S.D., Jinadasa, R.N. 2015. A preliminary investigation on methods of reducing antibiotic resistant bacteria in broiler litter in selected farms in mid country Sri Lanka. *Tropical Agricultural Research*. 26 (2). 412-417.
- Mariaselvam, A.A., **Dandeniya, W.S.**, Indraratne, S.P. Dharmakeerthi, R.S. 2013. High C/N materials mixed with cattle manure as organic amendments to improve soil productivity and nutrient availability. *Tropical Agricultural Research*. 25(2): 201-213.
- Chathurika, J.A.S. Indraratne, S.P., **Dandeniya, W.S.** 2013. Site Specific fertilizer recommendations for maize (*Zea mays* l.) grown in Reddish Brown Earth and Reddish Brown Latasolic soils. *Tropical Agricultural Research*. 25(3): 287-297.
- Dandeniya, W.S.**, Thies, J. E. 2012. Rhizosphere nitrification and nitrogen nutrition of rice plants as affected by water management. *Tropical Agricultural Research*. 24 (1): 1-10. **(Received the Award for the Best oral presentation of the session)**

Dandeniya, W. S., Rajapaksha, R.M.C.P. 2008. Copper availability and selective microbiological properties of an intensively cultivated ultisol in Nuwara Eliya. *Journal of the National Science Foundation of Sri Lanka*. 36 (4): 307-314.

Selected conference proceedings out of 40+

Nawarathna, K.K.K., **Dandeniya W.S.,** Dharmakeerthi, R.S., Weerasinghe, P. 2022. Can botanical nitrification inhibitors improve the yield of capsicum under tropical field conditions? World Congress of Soil Science. 31st July to 5th August, 2022. Glasgow, UK.(#1155)

Dandeniya, W.S., Jeewanthi, D., Kumaragamage, D. Casson, N. 2022. The impact of land-use type on soil organic carbon decomposers in a tropical agricultural landscape. World Congress of Soil Science. 31st July to 5th August, 2022. Glasgow, UK. (#764)

Dias, A.M., **Dandeniya W.S.** Dharmakeerthi, R.S. 2021. Mobility of phosphorous in a tropical paddy soil as affected by phosphate solubilizing bacteria. ASA, CSSA, SSSA International Annual Meeting. 7th to 10th November, 2021. Salt Lake City, USA.

Dandeniya, W.S. 2020. Carbon sequestration in soils under annual crop cultivation: challenges and way forward. Proceedings of the National Web-Conference on Resource Management and Biodiversity Conservation to Achieve Sustainable Development Goals organized by the Academy of Natural Resource Conservation and Management, Lucknow (UP), India from 11-12 September, 2020.

Dandeniya, W.S. 2019. Eco-friendly farming technologies for reducing reliance on chemical fertilizers for rice farming. Proceedings of the International Conference on Soil and Water Resources Management for Climate-Smart Agriculture, Global Food and Livelihood Security. 5th to 9th November 2019, New Delhi, India.

Dandeniya, W.S., Lambert, H.J.J.I, Thihagoda, T.K.M.D.P., Attanayaka, C.P., and Dharmakeerthi R.S. 2019. Phosphate solubilizing bacteria change P fractions in submerged soils and P availability for rice plants. Proceedings of International (SAARC) youth scientific conference on science and technology for prosperity: connecting lives with land, water and environment. June 5-6, 2019, Kathmandu, Nepal.

Dandeniya, W.S., Chathurika, J.A.S., Mariaselvam, A.A., Indraratne, S.P., Dharmakeerthi, R.S., Kumaragamage, D. 2019. Best management practices to address site specific soil fertility constraints and improve productivity of marginal agricultural lands cultivated with maize. International Symposium on Sustainable Land and Watershed Management, Ministry of Mahaweli Development and Environment, BMICH, Colombo, 24th October, 2019.

Hansika, K.D., **Dandeniya, W.S.** 2019. Can Dicyandiamide Effectively Suppress Nitrification in Tropical Soils? Peradeniya University International Research Sessions (iPURSE19ABS00184). University of Peradeniya, Sri Lanka, 11-12 September 2019.

Nawarathna, K.K.K., **Dandeniya W.S.,** Dharmakeerthi, R.S., Weerasinghe, P. 2019. Is the plant response to available nitrogen forms in soil vary among vegetable crops? Peradeniya University International Research Sessions

- (iPURSE19ABS00106). University of Peradeniya, Sri Lanka, 11-12 September 2019.
- Dandeniya W.S.**, Dharmakeerthi, R.S., Indraratne, S.P. Mariaselvam, A.A. Organic carbon fractions and nitrogen availability in an Entisol as affected by the application of carbonaceous organic soil amendments. Peradeniya University International Research Sessions (iPURSE19ABS00134). University of Peradeniya, Sri Lanka, 11-12 September 2019.
- Nawarathna, K.K.K., **Dandeniya W.S.**, Dharmakeerthi, R.S., Weerasinghe, P. 2019. Evaluation of yield advantage of capsicum as affected by application of botanical formulations with nitrification inhibition potential. International Symposium on Sustainable Soil Management. NAICC, Kandy, Sri Lanka. 5-6 December 2019.
- De Silva, L. H. N., C. D. A. Lakmali, U. K. Jayasinghe-Mudalige, R. S. Dharmakeerthi and **W. S. Dandeniya**, "Paddy Farmer's Willingness-To-Pay Towards Eco-Friendly Technologies: Case of Adoption of Parachute Technology", International Research Symposium (IRCUWU), Uwa Wellassa University, Badulla, 7 - 8 February 2019.
- De Silva, L. H. N., C. D. A. Lakmali, U. K. Jayasinghe-Mudalige, R. S. Dharmakeerthi, **W. S. Dandeniya**, W. K. Balasuriya and D. N. Sirisena. "Paddy Farmer's Willingness-To-Pay for Eco-Friendly Technologies Developed to Reduce the Chemical Fertilizer Usage in Sri Lanka", 12th Annual Research Forum, Sri Lanka Agricultural Economics Association, Hector Kobbekaduwa Agrarian Research and Training Institute (HARTI), Colombo 07, 22nd February 2019. **(Best Paper; Gold Medal)**
- Madushani, H.I., **Dandeniya, W.S.**, Attanayake, C.P., Dharmakeerthi, R.S., and Balasooriya, B.L.W.K., 2019. Effect of phosphorus-solubilizing bacteria application on phosphorus availability for rice under two different irrigation methods. Proceedings of the Faculty of Agriculture Undergraduate Research Symposium. 21st February 2019, University of Peradeniya. Sri Lanka.p102.
- Hettiarachchi, H.A., **Dandeniya, W.S.**, Dharmakeerthi, R.S., and Balasooriya, W.L.W.K., 2019. Biochar as a carrier material for phosphate solubilizing bacteria inoculant formation. Proceedings of the Faculty of Agriculture Undergraduate Research Symposium. 21st February 2019, University of Peradeniya. Sri Lanka.p78. **(Award from Inventors commission)**
- Dandeniya, W.S.**, Herath, E. M., Lowe, A., Mathaniga, K., Jinadasa, R.N. "Prevalence of antibiotic resistant bacteria in poultry litter based manures and potential threats on food safety for carrot", Global Symposium on Soil Pollution, FAO of United Nations, Rome, Italy, 2-4 May, 2018.
- Munasinghe, M.A.B.J., Balasooriya, B.L.W.K., Piyathilaka, M.A.P.C., Amarawansa R.P.U.I., **Dandeniya W.S.** and Dharmakeerthi, R.S. 2018. Cyanotoxicity Screening of Cyanobacteria Isolated from Paddy Fields in Sri Lanka Using Molecular Methods. Proceedings of the 17th Agricultural Research Symposium, Wayamba University of Sri Lanka. 56- 60.
- Sunil, A.J.Y.A.D., Balasooriya, B.L.W.K., Amarawansa R.P.U.I., **Dandeniya W.S.** and Dharmakeerthi, R.S. 2018. Molecular Identification of Cyanobacteria Isolated from Paddy fields of Sri Lanka. Proceedings of the 17th Agricultural Research Symposium, Wayamba University of Sri Lanka. 66- 70.

- Sadharekha, W.M.G.W., Balasooriya, Amarawansa R.P.U.I., **Dandeniya W.S.** and Dharmakeerthi, R.S. 2018. Cyanotoxicity Screening of Cyanobacteria Isolated from Paddy Fields in Sri Lanka Using Molecular Methods. Proceedings of the 17th Agricultural Research Symposium, Wayamba University of Sri Lanka.
- R.P.U.I. Amarawansa, B.L.W.K. Balasooriya, **W.S. Dandeniya**, B. Suganthan P.W.M. Tharindi and D.G.A.T.Dassanayake. 2018. Nitrogen fixation ability of Cyanobacteria isolated from tropical lowland paddy fields in Sri Lanka. International Conference on “Beneficial Microbes: Microbes for the Benefit of Mankind”- 30th July – 1st August 2018, Kuching, Sarawak, Malaysia
- Dandeniya, W.S.** Attanayake, R.N. “A comparison of soil fungal communities of dry-zone and wet-zone forests using a metagenomic approach.” Proceedings of the 1st Annual International Conference of Bioscience and Biotechnology. 12th- 14th January (2016). Colombo, Sri Lanka.
- Dandeniya, W. S.**, Herath, E. M., Samarasinghe, I., Jinadasa, R.N. 2014. Effect of tetracycline and enrofloxacin on soil microorganisms inhabiting an intensively cultivated Ultisol. The proceedings of One Health International Conference. University of Peradeniya, Sri Lanka (Sept. 5-6).
- Dandeniya, W.S.**, Dissanayake, R.J., Ranasinghe, C.N., Thalagoda, U., Thalagoda, S. 2014. Tea green-leaf yield as affected by soil fertility: A case study with small-holder tea planters in Kegalle and Kandy districts in Sri Lanka. *20th World congress of Soil Science*. Jeju, Korea (June 8-13).
- Herath, E.M. **Dandeniya, W.S.**, Samarasinghe, A.G.S.I., Bandara, T.P.M.S.D., Jinadasa, R.N. 2015. A preliminary investigation on methods of reducing antibiotic resistant bacteria in broiler litter in selected farms in mid country Sri Lanka. *Tropical Agricultural Research Journal*. 26 (2). 412-417. **(Received the Award for the Best Poster presentation)**
- Chathurika, J.A.S., Indraratne, S.P., **Dandeniya, W.S.**, Kumaragamage, D. 2014. Amendments to improve soil fertility and increasing maize (*Zea mays*) yield in mid country Sri Lanka. *ASA-CSSA-SSSA International annual meeting*. Long Beach, California (Nov. 2-5). Accepted for oral presentation.
- Dandeniya, W.S.**, Rajapakshe, R.M.C.P. 2013. Bacteria with potential plant growth-promoting abilities in the root environment of selected rice varieties grown in Sri Lanka. *The Proceedings of National Symposium on Soil Bio Diverstiy-2013, Ministry of Environment and Renewable Energy, Sri Lanka*. 120-126.
- Dandeniya, W.S.** 2013. Evaluating the Ability of Rice to Effectively Suppress the Activity of Soil Nitrifiers. *The Proceedings of National Symposium on Soil Bio Diverstiy-2013, Ministry of Environment and Renewable Energy, Sri Lanka*. 144-146.
- Vasujini, P., **Dandeniya, W.S.**, Dharmakeerthi, R.S. 2014. An assessment of the quality of biochar produced from coconut husk waste. *Proceedings of the Peradeniya University International Research Sessions, Sri Lanka* (July 4-5, 2014). Vol. 18.
- Mariaselvam, A.A., **Dandeniya, W.S.**, Indraratne, S.P., Dharmakeerthi, R.S. 2014. Growth and yield of maize as affected by organic amendments with potential for soil fertility improvement. *Proceedings of the*

Peradeniya University International Research Sessions, Sri Lanka (July 4-5, 2014). Vol. 18.

Dandeniya, W.S., Thies, J.E. 2011. Nitrifiers in the rice rhizosphere as affected by soil moisture regime. Proceedings of the 10th International Conference of the East and Southeast Asia Federation of Soil Science Societies. Colombo, Sri Lanka (October 10-13). pp 311-312.

Wijerathna, Y.U.C., **Dandeniya, W.S.**, Mithrasena, Y.J.P.K. 2013. Does oxidizing power of roots affect the iron toxicity tolerance of rice? *PURSE 2012*. University of Peradeniya, Sri Lanka (July 4th). pp.167.

Mariaselvam, A.A., **Dandeniya, W.S.**, Indraratne, S.P. Nutrient release from soil as affected by the composition of organic amendment. *PURSE 2012*. University of Peradeniya, Sri Lanka (July 4th). pp.168.

Lalanthi, M.W.C., **Dandeniya, W.S.**, Chandrasiri, U. Do lowland rice varieties prefer ammonium or nitrate? *PURSE 2012*. University of Peradeniya, Sri Lanka (July 4th). pp.231.

Feature articles in magazines

Dandeniya, W.S. Poultry Farming: A cause of antibiotic resistance in the environment. 2017. Hantana Vision. Vol. 3. Issue 2. pp. 16-17.

De Silva, L.H.N., Jayasinghe-Mudalige, U.K., Dharmakeerthi, R.S., and **Dandeniya, W.S.**, 2018. Paddy farmer's willingness-to-pay for eco-friendly technologies. **Policy Briefs 01**, Policy Briefs of Agribusiness Research in Agricultural Symposium – 2018, Centre for Agribusiness Studies (CABS), Wayamba University of Sri Lanka.pp1-2.

Lakmali, C.D.A, Jayasinghe-Mudalige, U.K., Dharmakeerthi, R.S., and **Dandeniya, W.S.**, 2018. Paddy farmer's willingness-to-pay for eco-friendly technologies. **Policy Briefs 03**, Policy Briefs of Agribusiness Research in Agricultural Symposium – 2018, Centre for Agribusiness Studies (CABS), Wayamba University of Sri Lanka.pp5-6.

INVITED SPEECHES

Invited lecture on "Driving agriculture productivity through innovation" at the conference on "Innovation driven Productivity" organized by the National Productivity Secretariat of the Ministry of Labor and Foreign Employment on 21st December 2022.

Invited lecture on "Soil for Nutrition" at the World Soil Day Celebrations organized by the Soil Science Society of Sri Lanka on 5th December, 2022 at University of Peradeniya.

Keynote expert talk on Improving soil fertility of degraded agricultural lands using carbon rich amendments at the international webinar on "Halting soil degradation to achieve sustainable development goals" organized by the International Soil Conservation Organization, India on 3rd December, 2021.

Invited presentation and participated as a panelist at the webinar on "Soil biodiversity: A key to ensure food security" organized by Food and Agriculture organization on 7th December, 2020 from 11.00 to 12.00 noon

Invited presentation and participated as a panelist at the Virtual-interactive Technical Session on Biochar for improving soil functions

organized by the Soil Science Society of Sri Lanka at 32nd annual Congress of PGIA on 19th November 2020.

Keynote address the technical session on Biodiversity Conservation, Resource Management and Ecological Restoration for Sustainable Development at the National Web-Conference on Resource Management and Biodiversity Conservation to Achieve Sustainable Development Goals organized by the Academy of Natural Resource Conservation and Management, Lucknow (UP), India from 11-12 September, 2020.

Keynote address in the Session on “Next Generation Nutrient and Water Management in Agriculture” at the International Conference on Soil and Water Resources Management for Climate-Smart Agriculture, Global Food and Livelihood Security organized by the Soil Conservation Society of India together with World Association of Soil and Water Conservation, and International Soil Conservation Organization. 5th to 9th November 2019 at NASC Complex, New Delhi, India.

Invited presentation in the session on “Nitrogen Management – Options and Solutions for Sustainable Development Goals and Circular Economy” on 24th October 2019 at the “Sri Lanka NEXT - A Blue Green Era” Programme 2019 on “Nitrogen Multi Actor Dialogue” organized by the United Nations Environment Program and the Ministry of Mahaweli Development and Environment at the Bandaranaike Memorial International Conference Hall (BMICH).

Joachim memorial lecture at the 49th Annual General Meeting of the Soil Science Society of Sri Lanka held on 28th March 2018 at the SRICANSOL Resource Centre, Faculty of Agriculture, University of Peradeniya.

Invited presentation at The World Academy of Science (TWAS) Young Affiliates’ presentation session at 14th General Conference of TWAS, Trieste (2018).

APPEARANCE IN PUBLIC-MEDIA

“Jathika Mehewara” program of Sirasa News 1st TV on 7th June 2022 from 10.00 to 11.00 am to discuss about the role of agriculture on food security in Sri Lanka.

“Jathika Mehewara” program of Sirasa News 1st TV on 2nd May 2022 from 10.00 to 11.00 am to discuss about the present status of agriculture in Sri Lanka and future developments.

“Jathika Mehewara” program of Sirasa News 1st TV on 23rd December 2021 from 10.00 to 11.00 am to discuss about the good practices for nutrient management in agriculture.

“Kalathraye kathabaha” program of Charana TV on 15th November, 2021 from 9.00 – 11.00 pm on agriculture and fertilizers (“govithena saha pohora”).

“Aluth Parlimenthuwa” program of Derana TV on 26th October, 2021 from 10.30 pm – 12.30 am to discuss about soil and poisons (“*pasa saha wasa*”).

“Mawatha” talk-show of Sirasa TV on 23rd September, 2021 from 10.30 pm -1.00 am to discuss about risks of organic fertilizer importation to Sri Lanka.

“Face the Nation” program of News 1st TV on 20th September, 2021 from 9.30-10.30 pm to discuss about impact of banning synthetic fertilizer imports to Sri Lanka.

“Good morning Sri Lanka” sundara shanida Morning program of Siyatha TV on 6th December, 2020 from 7.30 to 8.00 am to discuss the importance of soil as a natural resource.

Participated as a resource person at the radio program in Kandurata FM on 5th December, 2020 from 9.00 to 10 am to discuss about soil biodiversity and its importance for ensuring food security on invitation from the Rehabilitation of Degraded Land Project in Sri Lanka of Food and Agriculture organization (FAO) and Ministry of Environment.

AWARDS

Nominated by the New York Academy of Sciences as a young scientist to attend the annual Science and Technology for Society (STS) Forum in Kyoto, Japan from 6th - 8th October, 2019.

The recipient of following awards:

- SUSRED-2017 award from National Science Foundation of Sri Lanka for supervision of Ph.D. degree
- Best presenter in the session “Soil and water management” at the 24th annual congress of PGIA
- McDonald/Musgrave graduate student recognition award, crop and soil sciences, Cornell (2009)
- Best teaching assistant in the department of crop and soil sciences, Cornell (2008/2009)

Gold medals received at University of Peradeniya (2001-2005)

- Professor Kalpage gold medal for academic excellence in soil science
- Golden jubilee gold medal for the most outstanding performance in the core program
- Gold medal for the best performance in the subject of agribusiness management

Received four scholarships and three prizes for academic performance and three Gold medals for sports during undergraduate studentship (2001-2005)

**INTERNATIONAL
PROGRAMMES**

Participated at the Science and Technology in Society Forum, Kyoto, Japan (2019)

Participated at the workshop on “Bioavailability of contaminants in soil” at the GSOP18 organized by the Food and Agriculture Organization of the United Nations, Rome (2018)

Participated at the 14th General Conference of the World Academy of Science, Trieste (2018)

Provided leadership to the “Biophysical environment” sub-group in the Student Multidisciplinary Applied Research Team (SMART) of the Cornell International Institute for Food, Agriculture and Development (CIIFAD), visited South Africa (2010)

Participated in “Rice: Research to production” workshop at International Rice Research Institute in the Philippines (2008)