

Dr. Susha S Thara

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Summary

I had done my Ph D in Agaricus Mushrooms at College of Agriculture, Vellayani on collection of native species of Agaricus mushroom and development of techniques for its cultivation. I have been working with the strain improvement of Pleurotus mushroom and suitability of different oyster mushroom species in different agroecological zones of Kerala. I have also worked on the medicinal properties of the caterpillar mushroom *Polycephalomyces nipponicus* available at Kasaragod. I have worked on the integrated disease management of fungal diseases.

Research Highlights

- Documented 42 native species of agaricus from Kerala, developed techniques for growing the temperature tolerant Agaricus
- Developed improved strain of Pleurotus from interspecies hybridisation of *P. ostreatus* and *P. djamor*
- Associated with the release of Milky Mushroom 'Bheema'
- Associated with the development of management strategies for cowpea wilt, collar rot and web blight of cowpea, Leaf spot of bhindi and sigatoka leaf spot of banana which is included in the Package of Practice recommendations of KAU

Experience

Joined Kerala Agricultural University as Assistant Professor (Plant Pathology) in the year 2010

Education

- Graduated in Agricultural Science from Kerala Agricultural University (1994)
 - Post Graduation in Plant Pathology from Kerala Agricultural University (1997)
 - Ph.D in Plant Pathology from Kerala Agricultural University (2000)
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Area of Specialization

Mushroom, Integrated Plant disease management

Awards & Recognitions

- **Young Scientist Award** of STEC & Govt. of Kerala for the year 1998

- **Best paper Award** in International e conference on Post harvest disease management and value addition in horticultural crops 2021 organised by IARI – ICAR
- **Best oral Presentation** in International seminar on Sustainable urban Agricultural systems and community resilient cities on 2022 organized by TSS and Dept of Agricultural Extension, COA Vellayani, KAU

Research Projects

Completed

1. Augmenting planting material production through farmer participation and establishment of seed bank in Kollam Dt.. Funded by Rashtriya Krishi Vikas Yojana
2. Evaluation of Growth and performance of bittergourd using growth promoting organic substances through farmer participatory approach. Funded by Department of Agriculture, Kerala
3. Development of biocontrol technology for the management of postharvest crown rot of banana, Kerala State Council for Science Technology and Environment, Government of Kerala, India
4. Establishment of Mushroom Spawn Production Centre for employment generation for rural youth and unemployed women and for increasing the income of rural community. Funded by State Horticultural Mission.
5. Organic recycling for vegetable production in Homesteads- Funded under Kerala Agricultural University Plan Fund
6. Management of Amaranthus leaf blight under homestead situation - Funded under Kerala Agricultural University Plan Fund
7. Integrated management of wilt of cow pea through farmer participatory approach - Funded by Department of Agriculture, Kerala
8. Development of biologically intensified disease management strategy for leaf rot of coconut – Funded by state Planning Board

Publications

Journal Articles

1. Brinda, G. B. and Sussha, S. Thara. 2017. Nutritional analysis and organoleptic evaluation of paddy straw mushroom. *Food Science Research Journal* 8(2) 230-234
2. Aparna B., Sussha S. Thara, Geetha Lekshmi P. R., 2013. Effect of bioinoculants on soil chemical and biological regimes for sustaining soil health. *An Asian Journal of soil science* :8, p.167 -172
3. Dattatray L. Shinde, Sussha S. Thara and Kamala Nayar. 2014. Integrated management of Sigatoka leaf spot disease of banana (*Musa spp.*) using newer fungicides. *Plant Disease Research*. 29(2):148-150
4. Sussha S. Thara, Geethalakshmi P.R. and Aparna .B. 2014. Evaluation of microorganism for the growth and performance of bittergourd . *Journal of Aquatic Biology and Fisheries*. 2: 797 – 801
5. Deepa Rani C. V, Sussha S. Thara, Heera G and Narmadavathy. 2015. Studies on the symptoms of the necrotic wilt of sunflower caused by tobacco streak virus. *International Journal of Applied and Pure Science and Agriculture*. 11(1):71-75
6. Sussha S. Thara, and Deepa Rani C. V and Rageena S. 2016. Ecofriendly management of wilt of cowpea through farmers participatory approach. *International Journal of Applied and Pure Science and Agriculture*. 2(9):124-128
7. Brinda G. B. and Sussha S. Thara. 2018. Variability of paddy straw mushroom collections from southern Kerala. *Journal of Tropical Agriculture*. 56(1):73-80.
8. Kiran G V N S., Sussha S Thara and Brinda G B. 2018. In Vitro Efficiency of Fungicides against *Alternaria brassicicola* causing *Alternaria* leaf spot of cabbage. *International Journal of Current Microbiology and Applied Sciences*. 7(4): 1131-1135

9. Kiran G. V. N. S., Sussha S. Thara and SreePavan. 2018. Characterisation of *Alternaria brassicicola* causing Alternaria leaf spot of cabbage. *International Journal of Current Microbiology and Applied Sciences*. 7(10): 2727-2734.
10. Kiran G. V. N. S., Sussha S. Thara and Jyothy K. R. 2018. Studies on compatability of biocontrol agents with chemical fungicides for integrated management of Alternaria leaf spot of cabbage. *Journal of Pharmacology and Phytochemistry*. 7(5): 2974-2977.
11. Kiran G. V. N. S., Sussha S Thara and Brinda G B. 2018. Survey, Pathogenicity cultural and morphological characterisation of Alternaria isolates associated with Alternaria leaf spot of cabbage. *Journal of Pharmacognosy and Phytochemistry*. 7 (5): 2281-2286
12. Kiran G. V. N. S., Sussha S Thara and Brinda G B. 2018. Antagonistic potential of bioagents against *Alternariabrassicicola* the inciant of Alternaria leaf spot of cabbage. *International Journal of Pure and Applied and Biosciences*. 6 (5): 637-648
13. Jyothi K. R. and Sussha S. Thara. 2021. Development of improved strain of *Pleurotus* species by gamma irradiation. *J Food Sci Technol* [https:// doi.org /10.1007/s13197-021-05059-8](https://doi.org/10.1007/s13197-021-05059-8).
14. Jyothi K. R. and Sussha S. Thara. 2020. Development of improved strain of *Pleurotus* species by interspecific hybridization. *Journal of Tropical Agriculture* 58 (2): 196-205
15. Brinda G B, Sussha S Thara and Kiran G V N S M. 2021. Peptone Supplementation of Potato Dextrose Agar Medium Proved Better for Mushroom Mycelial Development. *J Krishi Vigyan* 2021, 10 (1) :189-195
16. Deepa R. Chandran, Sussha S. Thara., 2021. Etiology of fungi causing postharvest crown rot of Robusta variety banana in Kerala. *Journal of Tropical Agriculture* 59 (1): 124-133
17. Safeer M. M. and Sussha S Thara. 2022. Integrated management of Cymbidium mosaic disease in commercial Dendrobium orchids using root endophytic fungi *Piriformospora indica*. *Cogent Food & Agriculture* 8:2139848
18. Vijeth S., Heera G., Ayisha R., and Sussha S T. 2022. Single spore isolation and interspecific hybridisation of *Calocybe* spp. *Mushroom Research* 31 (1): 49-60
19. Lekshmi R. Krishnan, Joy Michal Johnson, Radhika N. S., Sussha S. Thara, Swapna Alex, Sreekala G. S. 2022. Beneficial Fungal Root Endophyte *Piriformospora indica* Protects Black Pepper Plants From Piper yellow mottle virus Infection. *Journal of the Pepper Industry* 12 (1), 33-54
20. Akhil G. L. Sussha S. Thara, Radhika N. S and Sajeesh P.K., 2022. Organoleptic evaluation and shelf life studies of five species of oyster mushroom. *The pharma Innovation Journal*. SP- 11(10): 154-159
21. Athira Nair., Sible G. V., Anit Cyriac, Sussha S. Thara, Joy Michal Johnson, Radhika N. S., 2022. Characterisation of novel strains of *Trichoderma* spp. And their utilization in management of damping off disease in tomato. *Journal Of Biological Control*. 36 (1): 31-46
22. Siva M., Sreeja S. J., Sussha S. Thara., Heera G., Anith K.N., 2023. Endophytic *Bacillus* spp. Suppress *Rhizoctonia solani*. *Rhizosphere* 25: 100682
23. Divya, S., Anusree A. R., Vigi S. Jiji S. G., Akshaya Das P, Rahul Dev A. S. Sussha S. Thara., Edna Mary Varghese., Pratheesh P. Gopinath., Anith K. N. 2023. Silver nanoparticles green synthesized with leaf extract of disease-resistant amaranthus genotypes effectively suppress leaf blight (*Rhizoctonia solani* Kühn) disease in a susceptible red amaranthus cultivar. 3- biotech., 13: 196
24. Deepa R. Chandran. and Sussha S. Thara 2023. Evaluation of antagonistic potential of fructosphere associated Microflora against major crown rot pathogen of Robusta variety Banana. *J. Krishi Vigyan*. 11 (2): 115-119
25. Nesma A, S., Sussha S. Thara., Soni K. B., Sindhura K. P., Krishnapriya P J. 2023. Expression profiling of laccase and B glucan synthase genes in *Pleurotus ostreatus* during different developmental stages. *Molecular Biology reports*.
26. Amritha S Kartha, Sussha S Thara and Divya S. 2023. Evaluation of in vitro efficacy of fungicides against *Fusarium proliferatum* inciting root rot of cassava. *The pharma Innovation Journal* 12 (5) 3261-3263
27. Aparna, R. S., Heera, G., Sussha, S.T. and Sreeja, S.J. 2022. Effect of medicinal plant extracts on mycelial growth of *Pleurotus florida*. *Mushroom Res*. 31 (1) : 109-112.
28. Nayana Sunil and Sussha S Thara. 2022. Evaluation of Biocontrol Agents and Chemical Fungicides Against *Sclerotium rolfsii* causing Stem Rot and Foliar Blight of Cowpea. *J. Krishi Vigyan*. 12 (2): 141-145

Popular Articles

1. B. Aparna and **Sussha S. Thara** 2011. Vilasmridhiyum Sushma moolakangalum- Kerala Karshakan, January Edition.
2. **Sussha S. Thara**, Lekha M. 2015. Alankarachedikalile Rogangal – Krishiyanganam. 2015 January Edition. p.44 – 46
3. Brinda G B, **Sussha S. Thara**. April 2017 Koon Vilayikkam Vyathastha Reethikalil – Karshakan April 2017

4. Brinda G B, **Susha S. Thara**. April 2017 ‘Ruchiyil Vampan Vaikkol Koon’ – Kalpadhenu March – September 2017
5. Brinda G B, **Susha S. Thara**, G N V S Madhukiran October – 2017. Karimpooppurogathe Akattam - Kerala Karshakan October – 2017
6. Brinda G. B, **Susha S. Thara** 2018. Koon krishiyile veritta vazhikal. Kerala Karshakan September 2018 p. 38 - 40
7. Brinda G.B and **Susha S Thara**.2018. “Novel techniques for growing mushrooms” in Kerala Karshakan e- journal. September 2018, p 25-28.
8. Brinda G.B and **Susha S Thara** and G V N S Madhu Kiran. 2018. “Seethakala Pachakkariyile rohaniyanthranam” in Kalpadhenu. September 2018, p35 - 39.
9. Divya S., **Susha S. Thara**, Aashitha Joy. 2022. Venelkala Sasyarogangalum Niyanthrana margangalum in Kalpadhenu. January - March 2022, p 21-25
10. Divya S., **Susha S. Thara**, Aashitha Joy. 2023. Pachakarivilakalile Mazhakkala Rogangalum Niyanthrana Margangalum in Kalpadhenu. April – June 2023, p13 - 21.

Books

1. **Susha S. Thara**, S. Bhavani Devi. 2012. A book on “Agaricus Species of Kerala - India Monographic studies”, LAP Lambert International publications, Germany
 2. V.K. Girija, **Susha S. Thara**., Naseema A and Umamaheswaran K. 2016 Malayalam book on Diseases of vegetables – Kerala Agricultural University Press Mannuthy
 3. Susha S Thara -2020. *Naveena Koon krishi* published by The state Institute of Languages, Kerala
- Chapter in edited book –**

1. Pest and Disease of millets, in the book ‘**The millet magic**’ published by KAU,2022
2. Role of Biofilm exopolysaccharide in management of Plant diseases in the book ‘**Current research and innovations in plant pathology**’ editor Hemant Kumar Singh published by Akinik publications, ISBN : 978-93-5570-226-5. 2022

Student Guidance (Major Advisor)

M. Sc.

Within KAU: Completed: 10

Within KAU: Ongoing : 2

Ph. D

Within KAU: Completed: 1

Within KAU: Ongoing : 3

Other Institutional Responsibilities

1. Currently acting as student Advisor/faculty mentor to 6 Undergraduate students.
2. Currently Academic officer (PG) of College of Agriculture, Vellayani.

Membership in Professional Associations

1. Life membership in the Mushroom Society of India
2. Annual membership in Indian Phytopathological Society