Bharathiar University

State University I "A++" Grade by NAAC I 46th Rank in MoE-NIRF
Maruthamalai Road, Coimbatore, Tamil Nadu - 641 046.

Dr T MUTHUKUMAR

Professor
Department of Botany

Bharathiar University
Coimbatore, 641045
Tamil Nadu

E-mail: tmkum@buc.edu.in
Phone: 9942436855
Office Number:

Research Area

- Root and Soil Biology
- Fungal Endophytes
- Mycorrhizal Technology
- Plant Anatomy
- Bioremediation

Courses Teaching

- Microbiology
- Mycology
- Bryophytes
- Plant Anatomy
- Horticulture
- Ecology
- Algal Technology
- Root and Soil Biology

Research Experience: 27

Teaching Experience: 20

Research Credentials (as on September 2025 – Source: Google scholar)

H-index: 38 Citations: 4390 i10-index: 97

Publications

National Journals: 4 International Journals: 134 Books/Chapters: 14

Education

PG Diploma
Subject : Bioinformatics
Institution : Bharathiar university
Affiliated University : Bharathiar university
Year of Award : December 2004

Ph. D.
Subject : Botany
Institution : Bharathiar Univiersity
Affiliated University : Bharathiar University
Year of Award : April 1997

M. Phil.
Subject : Botany
Institution : Bharathiar University
Affiliated University : Bharathiar University
Year of Award : December 1991

M. Sc.
Subject : Botany
Institution : Government Arts College,Coimbatore
Affiliated University : Bharathiar University
Year of Award : May 1990

Dr T MUTHUKUMAR , Professor , Department of Botany

B. Sc.
Subject : Botany
Institution : Government Arts College,Coimbatore
Affiliated University : Bharathiar University
Year of Award : April 1988

Publications

International Journals - 134

134. Anatomical and physicochemical attributes of endemic medicinal plant species Vincetoxicum capparidifolium (Wight & Arn.) Kuntze, Apocynaceae

Microscopy Research and Technique, 88(4): 1167-1180 (September 2025)
Prameela, A., Krishnasamy, T., Jayasree, M. & Muthukumar, T

133. Microstructural and physicochemical specifications of critically endangered medicinal tree species Elaeocarpus gaussenii Weibel, Elaeocarpaceae

Plant Biosystems (In Press). (September 2025)
Indumathi, R., Athira, P., Arunkumar, R., Thenmozhi, K., Balachandar, M. & Muthukumar, T.

132. An intergrative evaluation on pharmacognostical and physiochemical characteristics of endemic medicinal plant species Symplocos obtusa Wall. ex G. Don (Symplocaceae).

Discover Plants (Accepted). (September 2025)
Malavika, J., Athira, P., Thenmozhi, T. & Muthukumar, T

131. Synergistic effects of arbuscular mycorrhizal fungi on growth and nutrient uptake in proso, barnyard, and little millet genotypes under different soil types and conditions

Journal of Soil Science and Plant Nutrition 25(1): 603-617 (January 2025)
Deepika, S., Muthuraja, R. & Muthukumar, T

130. Morphological, anatomical, and histochemical study of Cordia diffusa KC Jacob—A steno endemic plant

Microscopy Research and Technique, 88(5): 1273-1291 (January 2025)
Haritha, M., Leena Lavanya, D. & Muthukumar, T.

129. Assessment of arbuscular mycorrhizal and dark septate endophytic fungal symbioses in five fruit plants of Manipur, North-East India

Journal of Mycopathological Research 63(1):127–139 (January 2025)
Chanu, S. N., Pandey, R. R., & Muthukumar, T

128. Distribution, molecular characterization and phosphate solubilization activity of culturable endophytic fungi from crop plant roots in North East (NE) India.

Vegetos, 37: 2400-2412 (December 2024)
Surendirakumar, K., Pandey, R.R. & Muthukumar, T.

127. Effects of particle size and aging on heavy metal adsorption by polypropylene and polystyrene microplastics under varying environmental conditions

Chemosphere 369, 143843 (December 2024)
Muthuraja, R., Ou, B., Muthukumar,T., Narhayanan, T.N., Chittamart, N. & Janjaroen, D.

126. Taxonomical implications of foliar epidermal anatomy of Impatiens L. species (Balsaminaceae) in the Nilgiris, Southern Western Ghats, India.

Flora 31: 152573 (September 2024)
Pechimuthu, M., Erayil, A.R. & Muthukumar, T.

125. Endorrhizal fungal symbiosis in aroids of the Western Ghats, southern India.

Notulae Scientia Biologicae 15: 11651-11651 (December 2023)
Anaswara, S., Ajithkumar, V., Balachandar, M. & Muthukumar, T.

Dr T MUTHUKUMAR , Professor , Department of Botany

124. Is Phyllanthus acidus a new host for Ganoderma lucidum?

Indian Phytopathology, 76: 947-951 (July 2023)
Muthukumar, T., Anaswara, S., Yuvarani, S., Nagaraj, K. and Muthuraja, R.,

123. Drought tolerance of Aspergillus violaceofuscus and Bacillus licheniformis and their influence on tomato growth and potassium uptake in mica amended tropical soils under water-limiting conditions.

Frontiers in Plant Science 14:1-18 (March 2023)
Muthuraja, R., Muthukumar, T., & Natthapol, C.

122. Colonization of intraradical structures of arbuscular mycorrhizal fungi by dark septate endophytic fungi

Rodriguésia 74: 1–6 (February 2023)
Bharathy, N. & Muthukumar, T.

121. Vegetative anatomy and endorrhizal fungal morphology of an endangered medicinal plant Gloriosa superba L.

Microscopy Research and Technique 85: 3466-3479 (October 2022)
Balachandar, M., Koshila Ravi, R., & Muthukumar, T.

120. Comparative vegetative anatomy of three Elaeocarpus species from the Western Ghats, Southern India.

Microscopy Research and Technique 85(10): 3296-3308 (October 2022)
Yuvarani, S., Karthik, S., Koshila Ravi, R. & Muthukumar, T.,

119. Mycorrhizae: a ray of hope for agricultural sustainability and food securit

Archieves of Microbiology 204: 264 (July 2022)
Thangavel, P., Anjum, N. A., Muthukumar, T., Sridevi, G., Vasudhevan, P. & Maruthupandian, A.

118. Physiological characterization of root endophytic Fusarium haematococcum for hydrolytic enzyme production, nutrient solubilization and salinity tolerance.

Biocatalysis and Agricultural Biotechnology 43: 102392 (June 2022)
Koshila Ravi, R., Prema Sundara Valli, P. & Muthukumar, T.

117. Diversity of termite species and their distribution in various habitats in Palakkad district, Kerala.

Indian Journal of Ecology 49:780-784. (June 2022)
Sijinamanoj, V., Kalleshwaraswamy, C.M., Muthukumar, T., Kulandaiveld,S. & Kathireswari, P.

116. Co-inoculation of halotolerant potassium solubilizing Bacillus licheniformis and Aspergillus violaceofuscus improves tomato growth and potassium uptake in different soil types under salinity.

Chemosphere 294:133718 (May 2022)
Muthuraja, R. & Muthukumar, T.

115. Characterization and biological activities of melanin pigment from root endophytic fungus, Phoma sp. RDSE17.

Archeves of Microbiologyl 204: 171 (May 2022)
Surendirakumar, K., Pandey, R.R., Muthukumar, T., Sathiyaseelan, A., Loushambam, S. & Seth, A

114. Comparative vegetative anatomy of Wrightia tinctoria R. Br. and the endemic Wrightia indica Ngan (Apocynaceae Juss.) occurring in peninsular India.

Flora 290 152043 (May 2022)
Sathya, E., Muthukumar, T. & Sekar, T.

113. Root endophytic fungus Nectria haematococca promotes growth and nutrient uptake of green gram through modifications in root architecture in soil and soilless substrate.

Proceedings of the National Academy of Sciences, India: Section B. Biological Sciences 91: 131–138. (October 2021)
Muthukumar, T. & Sulaiman, M.R.

112. Preferential colonization of native scented black rice (Oryza sativa L.) roots by indigenous arbuscular mycorrhizal fungi in terrace farming of North Eastern India

Proceedings of the National Academy of Sciences, India: Section B. Biological Sciences 91: 277–287 (April 2021)
Surendirakumar, K., Pandey, R.R., Muthukumar, T. & Pandian, S.

Dr T MUTHUKUMAR , Professor , Department of Botany

111. Anatomical adaptations and mycorrhizal morphology of two threatened Eulophia (Orchidaceae) growing in southern Western Ghats, India.

Flora 276–277: 1–14 (January 2021)
Koshila Ravi, R., Sowmiya, S., Balachandar, M. & Muthukumar, T.

110. Cadmium affects the regeneration of the leafy vegetable Talinum portulacifolium (Forssk.) Asch. ex Schweinf., stem cuttings in nutrient solution.

Annales de Biologicae 42: 147–159 (December 2020)
Muthukumar, T. & Dinesh Babu, S.

109. Plastic responses that confers invasiveness to Rivina humilis L.

Acta Oecologica Sinica 40: 464–472 (June 2020)
Koshila Ravi, R., Anusree, S. & Balachandar,M.,& Muthukumar, T.

108. Comparative vegetative and ecological anatomy of Sirhookera (Orchidaceae) growing in Western Ghats of Southern India.

Nordic Journal of Botany 38: 1–16 (May 2020)
Koshila Ravi, R., Balachandar, M., Jinsha, K. & Muthukumar, T.

107. Genotypic variation in response and dependency of pigeon pea on arbuscular mycorrhizal fungi in a tropical Alfisol.

Plant Biosystems 155:1-21 (April 2020)
Nagaraj, K., Vanishree, S. & Muthukumar, T.

106. Interactive influence of soil and plant genotypes on mycorrhizal dependency in finger millet

Journal of Soil Science and Plant Nutrition 20: 1287–1297 (March 2020)
Nagaraj, K., Koshila Ravi, R. & Muthukumar, T.

105. Competitive interaction between an arbuscular mycorrhizal fungus and phosphate solubilizing bacterium on growth and phosphorus uptake of Impatiens walleriana stem cutting in an unsterile field soil

ournal of Horticultural Research 27(2): 11–22 (November 2019)
Muthukumar, T. & Prabhu, A.

104. Vegetative anatomy of Tabernaemontana alternifolia L. (Apocynaceae) endemic to southern Western Ghats, India.

Acta Biologica Szegediensis 63(2): 185–193 (August 2019)
Yuvarani, S., Koshila Ravi, R., Anaswara, S., Balachandar, M. & Muthukumar,

103. Arbuscular mycorrhizal and dark septate endophyte fungal association in Capsicum chinense and the role of bioinoculants on its growth and yield in North Eastern India.

Journal of Agricultural Science 157: 31–44 (April 2019)
Surendirakumar, K., Pandey, R.R. & Muthukumar, T

102. Arbuscular mycorrhizal and dark septate endophyte fungal association in cassava (Manihot esculenta Crantz) varieties, southern India

Notulae Scientia Biologicae 11(1): 154–166 (March 2019)
Muthuraja, R., Muthukumar, T.

101. Comparative vegetative anatomy and mycorrhizal morphology of three South Indian Luisia species (Orchidaceae) with the note on their epiphytic adaptations

Flora 251: 39–61 (February 2019)
Balachandar, M., Koshila Ravi, R., Ranjithamani, A. & Muthukumar, T

100. Vegetative anatomy and mycorrhizal morphology of Schoenorchis nivea (Lindl.) Schltr., (Orchidaceae) and their adaptive significance

Acta Biologica Szegediensis 63(1): 1–13 (February 2019)
Balachandar, M., Koshila Ravi, R., Nagaraj, K. & Muthukumar, T

Dr T MUTHUKUMAR , Professor , Department of Botany

99. Coinoculation of arbuscular mycorrhizal fungi and phosphate solubilizing bacteria improves Acacia auriculiformis seedling growth and nutrient uptake in a tropical Alfisol soil

Journal of Forestry Research 29 (3): 663–673 (October 2018)
Muthukumar, T. & Udaiyan, K.

98. Dark septate root endophytic fungus Nectria haematococca improves tomato growth under water limiting conditions.

Indian Journal of Microbiology 58(4) 489–495 (June 2018)
Prema Sundara Valli, P. & Muthukumar, T

97. Vegetative anatomy of the medicinal orchid Bulbopbyllum sterile

LANKESTERIANA 18 (1): 13–22 (March 2018)
Muthukumar, T. & Shenbagam, M

96. Zinc influences regeneration of Talinum portulacifolium stem cuttings in nutrient solution

Notulae Scientia Biologicae 10(4) 530–539 (March 2018)
Muthukumar, T., Sarah Jaison & Dinesh Babu, S.

95. Endorhizal fungal association and colonization patterns in Solanaceae

Polish Botanical Journal 62 (2) 287–299 (December 2017)
Muthukumar, T. & Sathya, R.

94. Role and influence of soil microbial communities on plant invasion.

Ecological Questions 27 (3): 9–23 (December 2017)
Koshila Ravi, R. & Muthukumar, T

93. Vegetative anatomical adaptations of Epidendrum radicans (Epidendroideae, Orchidaceae) to epiphytic conditions of growth

Modern Phytomorphology 11: 117–130 (December 2017)
Muthukumar, T. & Shenbagam, M.

92. Arbuscular mycorrhizal fungus Scutellospora calospora (Nicol. & Gerd.) Walker & Sanders influences maize root growth and architecture in rock phosphate amended tropical soil.

Anales de Biologia 39: 211–222 (November 2017)
Priyadharsini, P. & Muthukumar, T.

91. Comparative vegetative anatomy of south Indian Vandas

Flora 235: 59–75 (October 2017)
Kowsalya, A., Rojamala, K. & Muthukumar, T

90. The root endophytic fungus, Curvularia geniculata from Parthenium hysterophorus roots improve plant growth through phosphate solubilization and phytohormone production.

Fungal Ecology 27: 69–77 (June 2017)
Muthukumar, T. &. Priyadharsini, P.

89. Chromium accumulation in medicinal plants growing naturally on tannery pollutant contaminated and non-contaminated soils

Biological Trace Elements Research 175: 223–235 (May 2017)
Sarah Jaison &. Muthukumar, T.

88. Potassium fertilization influences indigenous arbuscular mycorrhizal formation and function in a tropical Alfisol.

Communications in Soil Science and Plant Analysis 48(5) 524–538 (April 2017)
Chandra Gandhi, K., Priyadharsini, P. & Muthukumar, T.

87. Comparative anatomy of aerial and substrate roots of Acampe praemorsa (Rox.) Blatt. & McCann

Flora 226: 17–28 (January 2017)
Muthukumar, T. & Kowsalya, A

Dr T MUTHUKUMAR , Professor , Department of Botany

86. Arbuscular mycorrhizal and dark septate endophyte fungal associations in Asparagus.

Turkish Journal of Botany 40: 662-675 (October 2016)
Muthukumar, T. & Muthuraja, R

85. Root fungal associations in non-orchidaceous vascular lithophytes of Siruvani Hills, Western Ghats, southern India.

Acta Botanica Brasilica 30 (3): 407–421 (September 2016)
Muthukumar, T., Chinnathambi, M., Priyadharshini, P.

84. Influence of season and edaphic factors on endorhizal fungal associations in subtropical plantation forest trees of Northeastern India

Flora 222: 1-12 (June 2016)
Pandey, R.R., Ishworani, C. & Muthukumar, T

83. Morphology, anatomy and mycotrophy of pseudobulb and subterranean organs in Eulophia epidendraea and Malaxis acuminata of sub family (Epidendroideae, Orchidaceae)

Flora 217: 14-23 (November 2015)
Uma, E., Rajendran, R. & Muthukumar, T.

82. Mycorrhizal and septate endophytic fungal associations in gymnosperms of southern India

Anales de Biologia 37: 83-94 (September 2015)
Nagaraj, K., Priyadharshini, P. & Muthukumar, T.

81. Ethno medicinal Importance of fern and fern- allies traditionally used by tribal people of Palani Hills (Kodaikanal), Western Ghats, South India

Journal of Medicinal Herbs and Ethnomedicine 1(1): 4-9 (July 2015)
Sathiyaraj, G., Muthukumar, T. & Ravindran, K. C

80. A new species of Malaxis (Orchidaceae, Epidendroideae) from the Southern Western Ghats, India

Webbia: Journal of Plant Taxonomy and Geography 70 (1): 65-70 (February 2015)
Muthukumar, T., Rajendran, A., Priyadharsini, P. & Sarvalingam, A

79. Fly ash mycorrhizoremediation through Paspalum scrobiculatum L., inoculated with Rhizophagus fasciculatus

Comptes rendus Biologies 338: 29-39 (January 2015)
Channabasava A., Lakshman, H.C. & Muthukumar, T

78. Occurrence of the follicolous parasitic alga Cephaleuros virescencs on cultivated ornamental plants in southern India

Muthukumar, T., Uma, E. & Priyadharsini, P. (December 2014)
Botanica Lithuanica 20 : 87-98

77. Arbuscular mycorrhizal and dark septate endophyte fungal associations in south Indian aquatic and wetland macrophytes.

Journal of Botany 2014, Article ID 173125, 14 pages (December 2014)
Kumar, S. & Muthukumar, T.

76. Arbuscular mycorrhizal and septate endophyte fungal associations in ferns and fern allies of Palni Hills, Western Ghats, southern India.

Brazilian Journal of Botany 37: 561-581 (October 2014)
Muthukumar, T., Sathiyaraj, G., Priyadharsini, P., Uma, E. & Sathiyadash, K.

75. Influence of crop species and edaphic factors on the distribution and abundance of Trichoderma in Alfisol soils of southern India.

Acta Botanica Croatica 73: 37-50 (September 2014)
Muniappan, V & Muthukumar, T.

Dr T MUTHUKUMAR , Professor , Department of Botany

74. In vitro symbiotic seed germination of south Indian endemic orchid Coelogyne nervosa A. Rich.

Mycoscience 55: 183-189 (August 2014)
Sathiyadash, K., Muthukumar, T., Balamurugan, S., Satishkumar, S. & Pandey, R. R. 2014

73. Comparative study of the effects of organic selenium on hen performance and productivity of broiler breeders.

British Poultry Science 55: 367-374 (July 2014)
Rajashree, K., Muthukumar, T. & Karthikeyan, N.

72. Arbuscular mycorrhizal and dark septate endophyte fungal association in lycophytes and ferns of Kolli Hills, Eastern Ghats, Southern India.

American Fern Journal 104: 67-102 (June 2014)
Muthuraja, R., Muthukumar, T., Sathiyadash, K., Uma, E. & Priyadharsini, P.

71. Comparative root morphological anatomy of Zingiberaceae.

Systematics and Biodiversity 12:195-209 (May 2014)
Uma, E. & Muthukumar, T.

70. Influence of inorganic and organic selenium sources on broiler performance and meat quality.

Iranian Journal of Applied Animal Science 4: 151-157 (January 2014)
Rajashree, K., Muthukumar, T. & Karthikeyan, N.

69. Assessment of metal accumulation capacity in Brachiaria ramosa collected from cement waste dumping area for the remediation of metal contaminated soil

Ecological Engineering 60: 96-98 (November 2013)
Lakshmi, P.M., Jaison, S., Muthukumar, T. & Subbhuram, C.V.

68. In vitro asymbiotic seed germination, mycorrhization and seedling development of Acampae praemorsa (Roxb.) Blatt. & McGann, a common south Indian orchid.

Asian Pacific Journal of Reproduction 2: 114-118 (November 2013)
Sathiyadash, K., Muthukumar, T., Balamurugan, S., Satishkumar, S., Uma, E., Jaison, S. & Priyadharsini, P.

67. Preparation of selenium tolerant yeast Saccharomyces cerevisiae.

Journal of Microbiology and Biotechnology Research 3: 46-53 (August 2013)
Rajashree, K. & Muthukumar, T

66. Root morphology and mycotrophy of Disperis neilgherrensis (Orchidaceae) from Western Ghats, southern India.

Anales de Biologia 35: 89-94 (May 2013)
Muthukumar, T., Uma, E. & Pandey, R.R

65. Asymbiotic seed germination of Cymbidium bicolor Lindl. (Orchidaceae) and the influence of mycorrhizal fungus on seedling development

Acta Physiologia Plantarum 35: 829-840 (March 2013)
Mahendran, G., Muniappan, V, Ashwini, M., Muthukumar, T. & Narmatha Bai, V

64. Arbuscular mycorrhizal and septate endophyte fungal associations in lycophytes and ferns of south India.

Symbiosis 59: 15-33 (January 2013)
Muthukumar, T. & Prabha, K

63. Selection of culture medium and conditions for the production of selenium enriched Saccharomyces cerevisiae.

African Journal of Biotechnology 12: 2972-2977 (January 2013)
Rajashree, K. & Muthukumar, T.

62. Mycorrhizal association and morphology in orchids.

Journal of Plant Interactions 7: 238-247 (September 2012)
Sathiyadash, K., Muthukumar, T., Uma, E. & Pandey, R.R.

Dr T MUTHUKUMAR , Professor , Department of Botany

61. Patterns of endorhizal fungal associations in fruit crops of southern India.

Journal of Plant Nutrition and Soil Science -Zeitschrift Fur Planzenernahru 175: 572-581 (June 2012)
Jaison, S., Rajeswari, K. & Muthukumar, T.

60. Tree species as hosts for arbuscular mycorrhizal and dark septate endophyte fungi.

Journal of Forestry Research 23: 641-649 (May 2012)
Uma, E., Sathiyadash, K., Loganathan, J. & Muthukumar, T.

59. Fungal associations in gametophytes and young sporophytic roots of the fern Nephrolepis exaltata

Acta Botanica Croatica 71: 159-175 (April 2012)
Muthukumar, T. & Prabha, K.

58. Arbuscular mycorrhizal and dark septate fungal associations in shallot (Allium cepa L. var. aggregatum) under conventional agriculture.

Acta Botanica Croatica 71: 1-17. (March 2012)
Priyadharsini, P., Pandey, R. R. & Muthukumar, T.

57. Morphology, anatomy and mycorrhizae in subterranean parts of Zeuxine gracilis (Orchidaceae).

Anales de Biología 33: 127-134 (December 2011)
Muthukumar, T., Uma, E., Karthikeyan, A., Sathiyadash, K., Jaison, J., Priyadharsini, P., Chongtham, I. & Muniappan, V

56. Etiology of Trichosporium vesiculosum Butl., causing blister bark disease in Casuarina equisetifolia Forst

Plant Pathology Journal 10: 85-88 (January 2011)
Karthikeyan, A., Muthukumar, T. & Sureka, I

55. Arbuscular mycorrhizal and dark septate fungal associations in south Indian grasses

Symbiosis 52: 21-32 (November 2010)
Sathiyadash, K., Muthukumar, T. & Uma, E

54. Growth response and nutrient utilization of Casuarina equisetifolia seedlings inoculated with bioinoculants under tropical nursery conditions

New Forests 40: 101-118 (June 2010)
Muthukumar, T. & Udaiyan, K.

53. Mycorrhizal and dark septate fungal associations in gingers and spiral gingers.

Botany 88: 500-511 (June 2010)
Uma, E., Muthukumar, T., Sathiyadash, K. & Muniappan, V.

52. Occurrence and morphology of endorhizal fungi in crop species

Tropical and Subtropical Agroecosystems 12: 593-604 (May 2010)
Muthukumar, T. & Tamilselvi, V.

51. Comparison of arbuscular mycorrhizal and dark septate endophyte fungal associations in soils irrigated with pulp and paper mill effluent and well-water

European Journal of Soil Biology 46: 157-167 (April 2010)
Muthukumar, T. & Vediyappan, S

50. Use of arbuscular mycorrhizal in phytoremediation of heavy metal contaminated soils.

Proceedings of Indian National Science Academy – Section B 80: 103-121 (April 2010)
Muthukumar, T. & Bagyaraj, D. J

49. Mycorrhizal and dark septate endophyte fungal association in shola species of Western Ghats, southern India

Mycoscience 51: 44-52 (January 2010)
Bagyalakshmi, G., Muthukumar, T., Sathiyadash, K & Muniappan, V.

48. The mycorrhizal status of south Indian epiphytic orchids.

Journal of the Orchid Society of India 24: 29-33 (January 2010)
Murugan, T., Sathiyadash, K., Muniappan, V. & Muthukumar, T

47. Arbuscular mycorrhizal morphology in crops and associated weeds in tropical agro-ecosystems

Mycoscience 50: 233-239 (May 2009)
Muthukumar, T. & Prakash, S. C

Dr T MUTHUKUMAR , Professor , Department of Botany

46. Mycorrhizal morphology of nun's orchid [Phaius tankervilliae (Banks ex ? Herit.) Blume.].

Mycorrhiza News 21: 9-11 (January 2009)
Muthukumar, T. & Sathiyadash, K.

45. Arbuscular mycorrhizal morphology in sporophyte of Psilotum nudum.

Phytomorphology 59: 141-146 (January 2009)
Muthukumar, T., Sathiyadash, K., Uma, E. & Muniappan, V.

44. Influence of bioinoculants on growth, nutrient uptake and yield of green gram [Vigna radiata (L.) Wilczek]

Journal of Sustainable Agriculture 31: 85-109 (April 2007)
Rajeshkannan, V., Thangapandian, V., Muthukumar, T. & Sumathi, C.S.

43. Arbuscular mycorrhizal morphology and dark septate fungal associations in medicinal and aromatic plants of Western Ghats, Southern India.

Mycorrhiza 17: 11-24 (October 2006)
Muthukumar, T., Senthilkumar, M., Rajangam, M. & Udaiyan, K.

42. Importance of seed reserves in arbuscular mycorrhizal formation and growth of Azadirachta indica A. Juss.

Journal of Sustainable Forestry 22: 15-32 (July 2006)
Thangapandian,V., Muthukumar,T., Rajeshkannan,V. & Udaiyan,K.

41. Growth of nursery grown bamboo inoculated with arbuscular mycorrhizal fungi and plant growth promoting rhizobacteria in two tropical soil types with and without fertilizer application.

New Forests 81: 469-485 (May 2006)
Muthukumar, T. & Udaiyan, K.

40. Growth response of Acacia planifrons W. et A. to arbuscular mycorrhizal fungi and nitrogen fixing bacteria under nursery conditions.

Forests, Trees and Livelihoods 16: 269-275 (January 2006)
Karthikeyan, A. & Muthukumar, T.

39. Distribution, spore ontogeny and host reactions in Acaulospora scrobiculata (Diversisporales).

Nova Hedwigia 81: 477-492 (November 2005)
Muthukumar, T., Damodaran, P.N., Rajeshkannan, V. & Udaiyan, K.

38. Response of tea (Camellia sinensis (L.) O. Kuntze) to arbuscular mycorrhizal fungi under plantation nursery conditions.

Biological Agriculture and Horticulture 22: 305-319 (April 2005)
Karthikeyan, A., Muthukumar, T. & Udaiyan, K.

37. Proteomics of arbuscular mycorrhizal association

Bioinformatics India 2: 67-78 (September 2004)
Muthukumar,T. & Udaiyan,K.

36. Arbuscular mycorrhizal fungi- a saviour in plant micropropagation

South Asian Journal of Socio-Political Studies 5: 117-120 (July 2004)
Muthukumar, T. & Udaiyan, K.

35. Root symbiont technology for forest nurseries: the need of the day

South Asian Journal of Socio-Political Studies 4: 118-124/148. (June 2004)
Muthukumar, T. & Udaiyan, K

34. Mycorrhizae in sedges- an overview.

Mycorrhiza 14: 65-77 (April 2004)
Muthukumar, T., Udaiyan, K. & Shanmughavel, P

33. Mycorrhiza of plants in different vegetation types in tropical ecosystems of Xishuangbanna, southwest China

Mycorrhiza 13: 289-297 (December 2003)
Muthukumar, T., Liqing, S., Yang, X., Cao, M., Tang, J. & Zheng, Z.

Dr T MUTHUKUMAR , Professor , Department of Botany

32. Distribution of roots and arbuscular mycorrhizal association in tropical forest types of Xishuangbanna, southwest China

Applied Soil Ecology 22: 241-253 (January 2003)
Muthukumar, T., Liqing, S., Yang, X., Cao, M., Tang, J. & Zheng, Z

31. Growth and yield of cowpea as influenced by changes in arbuscular mycorrhiza in response to organic manuring.

Journal of Agronomy and Crop Science 188: 123-132 (November 2002)
Muthukumar, T. & Udaiyan, K.

30. Seasonality of vesicular arbuscular mycorrhizae in sedges in a semi-arid tropical grassland.

Acta Oecologia 23: 337-347 (October 2002)
Muthukumar, T. & Udaiyan, K.

29. Arbuscular mycorrhizae in cycads of southern India.

Mycorrhiza 12: 213-217 (August 2002)
Muthukumar, T. & Udaiyan, K.

28. Arbuscular mycorrhizal fungal composition in semi-arid soils of Western Ghats, southern India.

Current Science 82: 624-628 (March 2002)
Muthukumar, T. & Udaiyan, K.

27. Response of neem (Azadirachta indica A. Juss) to indigenous arbuscular mycorrhizal fungi, phosphate solubilizing and asymbiotic nitrogen fixing bacteria under tropical nursery conditions

Biology and Fertility of Soils 34: 417-426 (December 2001)
Muthukumar, T., Rajeshkannan, V. & Udaiyan, K. 2001

26. Effect of fumigant and pesticides on the mycorrhization and nodulation of tree legume seedlings

Journal of Tropical Forest Science 13: 19-30. (February 2001)
Udaiyan, K., Muthukumar, T., Vasantha, K., Greep, S. & Narmatha Bai, V.

25. Biomass production in an age series of Bambusa bambos plantations

Biomass and Bioenergy 20: 113-117 (February 2001)
Shanmugavel, P., Peddabiah, R.S. & Muthukumar, T.

24. Litter production and nutrient return in Bambusa bambos plantation.

Journal of Sustainable Forestry 11: 71-82. (October 2000)
Shanmughavel, P., Peddappaiah, R.S. & Muthukumar, T.

23. Influence of organic manures on arbuscular mycorrhizal fungi associated with Vigna unguiculata (L.) Walp., in relation to tissue nutrients and soluble carbohydrates in roots under field conditions.

Biology and Fertility of Soils 31: 114-120 (May 2000)
Muthukumar, T. & Udaiyan, K.

22. Arbuscular mycorrhizas of plants growing in Western Ghats region, Southern India.

Mycorrhiza 9: 297-313 (April 2000)
Muthukumar, T. & Udaiyan,K.

21. The role of seed-reserves in arbuscular mycorrhizal formation and growth of Leucaena leucocephala (Lam.) de Wit. and Zea mays L.

Mycorrhiza 9: 323-330 (April 2000)
Muthukumar, T. & Udaiyan, K.

20. Glomus viscosum – An arbuscular mycorrhizal fungus from western ghats, southern India.

Journal of Mycology and Plant Pathology 35: 153-156. (April 2000)
Muthukumar, T. & Udaiyan, K.

19. Morphological variations in Sclerocystis sinuosa of Western Ghats, Southern India.

Journal of Mycology and Plant Pathology 30: 34-40. (January 2000)
Muthukumar, T., Udaiyan, K., Vasantha, K. & Manian, S.

Dr T MUTHUKUMAR , Professor , Department of Botany

18. Vesicular arbuscular mycorrhizae in pteridophytes of Western Ghats, Southern India.

Phytomorphology 50: 132-142. (January 2000)
Muthukumar, T. & Udaiyan, K.

17. Mycorrhizae in sedges as related to root character and its ecological significance

Pertanika Journal of Tropical Agricultural Science 22: 9-17 (August 1999)
Muthukumar, T., Udaiyan, K., Vasantha, K., Kleiner, D. & Manian, S.

16. Spore in spore syndrome in vesicular-arbuscular mycorrhizal fungi and its seasonality in a tropical grassland

Nova Hedwigia 68: 339-349 (June 1999)
Muthukumar, T. & Udaiyan, K.

15. Effect of fumigation and pesticide drenches on VAM status and growth in cereals

Journal of Environmental Biology 20: 167-175. (April 1999)
Udaiyan, K., Greep, S., Muthukumar, T. & Chitra, A

14. Influence of sporganic matter on AM colonization and associated rhizosphere mycoflora in Vigna unguiculata sub . unguiculata (L.) Walp

Pertanika Journal of Tropical Agricultural Science 21: 37-51. (January 1998)
Udaiyan, K., Muthukumar, T., Chitra, A. & Greep, S.

13. Within season variations of VA mycorrhizal fungi in relation to soil factors in nutrient deficient tropical soils

New Botanist 25: 117-135. (January 1998)
Muthukumar, T., Udaiyan, K. & Manian, S.

12. Influence of native endomycorrhiza, soil flooding and nurse plant on mycorrhizal status and growth of purple nut sedge (Cyperus rotundus L.).

Agriculture Ecosystems and Environment 61: 51-58 (January 1997)
Muthukumar, T., Udaiyan, K., Karthikeyan, A. & Manian, S.

11. Response of siratro (Macroptilium atropurpureum Urb. Rabaceae) to vesicular-arbuscular mycorrhizal fungi and Rhizobium sp. in sterilized soil.

Pertanika Journal of Tropical Agricultural Science 20: 19-29 (January 1997)
Greep,S., Muthukumar,T., Udaiyan, K. & Narmatha Bai, V

10. Influence of edaphic and climatic factors on dynamics of root colonization and spore density of vesicular-arbuscular mycorrhizal fungi in Acacia farnesiana Wild. and A. planifrons W.et.A.

Trees: Structure and Function 11: 65-71 (December 1996)
Udaiyan, K., Karthikeyan, A. & Muthukumar, T

9. Influence of effluent irrigation on VA mycorrhizae

Indian Journal of Microbiology 36: 37-40. (November 1996)
Srinivasan, D., Muthukumar, T. & Udaiyan, K.

8. Vesicular-arbuscular mycorrhizae in tropical sedges of southern India

Biology and Fertility of Soils 22: 96-100 (April 1996)
Muthukumar, T., Udaiyan, K. & Manian, S

7. Influence of vesicular - arbuscular mycorrhiza and Rhizobium sp. on growth responses and nutrient status of Tephrosia purpurea Pers.

Acta Botanica Indica 23: 75-80. (October 1995)
Muthukumar, T. & Udaiyan, K.

6. Occurrence of vesicular - arbuscular mycorrhizae in a waste water irrigated field in Bharathiar University, Coimbatore

Pollution Research 14: 157-164. (October 1995)
Srinivasan, D., Muthukumar, T. & Udaiyan, K

5. Biostatic effect of fumigation and pesticide drenches on an endomycorrhizal - Rhizobium - legume tripartite association under field conditions

Biology and Fertility of Soils 20: 275-283 (September 1995)
Udaiyan, K., Manian, S., Muthukumar, T. & Greep, S.

4. Influence of vesicular - arbuscular mycorrhiza and Rhizobium sp. on growth responses and nutrient status of Tephrosia purpurea Pers

Acta Botanica Indica 23: 75-80. (January 1995)
Muthukumar, T. & Udaiyan, K

3. Vesicular - arbuscular mycorrhizal status of some ornamental plants

Acta Botanica Indica 22: 49-53 (November 1994)
Muthukumar, T. & Udaiyan, K

2. Vesicular-arbuscular mycorrhizae in certain tropical wild legumes

Annals of Forestry 2: 33-43 (September 1994)
Muthukumar, T., Udaiyan, K. & Manian, S.

1. Role of edaphic factors on VAM fungal colonization and spore populations in certain tropical wild legumes.

Pertanika Journal of Tropical Agricultural Science 17: 24-33. (June 1994)
Muthukumar, T., Udaiyan, K. & Manian, S

Books/Chapters - 14

14. Insight into the role of arbuscular mycorrhizal fungi in sustainable agriculture.

Environmental Sustainability – Role of green technologies (Thangavel, P. & Sridevi, G., eds.) Springer, 3-37 (January 2015)
Priyadharsini, P. & Muthukumar, T.

13. Role of arbuscular mycorrhizal fungi in alleviation of acidity stress on plant growth

Use of Microbes for the Alleviation of Soil Stresses (Mohammad Miransari, ed.). Springer, New York, US, pp. 43-71 (January 2014)
Muthukumar, T., Priyadharsini, P., Uma, E., Jaison, S. & Pandey, R. R.

12. Arbuscular mycorrhizal fungal strains and soil type influences growth, nodulation and nutrient uptake in Casuarina equisetifolia.

Microbiological Research in Agrosystem Management (Rajesh Kannan, V. ed.). Springer India Private Limited, New Delhi; pp. 35-52 (January 2013)
Muthukumar, T., Uma, E. & Priyadharsini, P.

11. Influence of bioinoculants on growth and nutrient uptake in Dalbergia latifolia under tropical nursery conditions

Microbiological Research in Agrosystem Management (Rajesh Kannan, V. ed.). Springer India Private Limited, New Delhi; pp. 207-234 (January 2013)
Rajesh Kannan, V., Dhanapal, K. & Muthukumar, T.

10. Evaluation of the growth and nutrient uptake of Casuarina equisetifolia on Alfisol soil inoculated with different arbuscular mycorrhizal fungi

Advances in Casuarina Research in India – Proceedings of the 2nd National Seminar on Casuarinas (Jayaraj, R.C.S., Rekha R. Warrier, Nicodermus, A. & Krishnakumar, N. eds.). IFGTB, Coimbatore, Inida; pp. 49-58 (January 2012)
Muthukumar, T., Karthikeyan, A. & Udaiyan, K.

9. Influence of organic pollutants on arbuscular mycorrhizal fungi.

Mycorrhizal Fungi: Soil, Agriculture and Environmental Implications (Susanne M. Fulton, ed.) Nova Publishers (USA); pp. 113-132 (January 2011)
Uma, E., Sarah Jaison & Muthukumar, T.

8. Role of organic amendments on arbuscular mycorrhizal formation and function.

Soil Microbes and Environmental Health (Miransari, M. ed.) Nova Publishers (USA); pp. 217-237 (January 2011)
Sarah Jaison, Uma, E. & Muthukumar, T.

7. Morphology and taxonomy of arbuscular mycorrhizal fungi.

Manual on Identification and use of Mycorrhizal Fungi in Forestry (Kumutha, K. & Narayanan, R. eds.). Department of Agricultural Microbiology, Centre for Plant Molecular Biology, Tamil Nadu Agricultural University, Coimbatore. pp. 28-58. (January 2009)

Muthukumar, T.

Dr T MUTHUKUMAR , Professor , Department of Botany

6. Influence of bioinoculants on growth, nutrient uptake and disease incidence in groundnut (Arachis hypogea L.).

Role of Biocontrol Agents for Disease Management in Sustainable Agriculture (Ponmurugan, P. & Deepa, M.A. eds.) Research India Publications, Delhi. pp. 266-283 (January 2009)

Rajeshkannan, V. & Muthukumar, T.

5. Arbuscular mycorrhizal fungi in forest tree seedling production

The Mycorrhizae: Diversity, Ecology and Applications (Tiwari, M. & Sati, S.C. eds.). Daya Publishing House, Delhi. pp. 200-223. (January 2007)

Muthukumar, T. & Udaiyan, K.

4. Arbuscular mycorrhizal associations in medicinal plants of Western Ghats in southern India

Mycorrhiza (Prakash, A. & Mehrotra, V. S. eds.). Scientific Publishers, Jodhpur, India. pp. 67-74. (January 2006)

Muthukumar, T. & Udaiyan, K.

3. Growth improvements of acacias by indigenous arbuscular mycorrhial fungi, Rhizobium and phosphate solubilizing bacteria in non-sterile field soil

Mycorrhiza (Prakash, A. & Mehrotra, V. S. eds.). Scientific Publishers, Jodhpur, India. pp. 11-19. (January 2006)

Udaiyan, K. & Muthukumar, T.

2. Arbuscular mycorrhiza – a biological tool for the improvement of tree seedling in nurseries.

Tree Improvement and Biotechnology (Shanmughavel, P & Ignacimuthu, S eds.). Pointer Publishers, Jaipur, India. pp. 73-99. (March 2003)

Muthukumar, T. & Udaiyan, K

1. Vesicular - arbuscular mycorrhizae in dicots of a nutrient deficient semi - arid grassland. In : Mycorrhizae

Mycorrhizae : Biofertilizers for the Future, (Ed.) Alok Adholeya & Sujan Singh, Tata Energy Research Institute, New Delhi, India, pp. 541-544. (January 1995)

Muthukumar, T. & Udaiyan, K.

National Journals - 4

4. Gigaspora decipens (Glomales) an arbuscular mycorrhizal fungi from Western Ghats of Southern India.

Journal of Mycology and Plant Pathology 32: 96-99 (January 2002)

Muthukumar, T. & Udaiyan, K.

3. Vesicular arbuscular mycorrhizal association in medicinal plants of Maruthamalai Hills, Western Ghats, Southern India.

Journal of Mycology and Plant Pathology 31:180-184. (January 2001)

Muthukumar, T. & Udaiyan, K.

2. Sclerocystis taiwanensis Wu & Chen - First record in India

Journal of the Indian Botanical Society 76: 129-130 (April 1997)

Muthukumar, T., Udaiyan, K. & Manian, S.

1. Vesicular-arbuscular mycorrhizal fungi in Western Ghats

Indian Botanical Contactor 10: 79-83. (January 1993)

Muthukumar, T., Udaiyan, K. & Manian, S