

## REFERENCES

- Aggarwal, A., N. Kadian, A. Tanwar, A. Yadav, K.K. Gupta. 2011. Role of Arbuscular Mycorrhizal Fungi (AMF) in Global Sustainable Development. *Journal of Applied and Natural Science* 3 (2): 340-351
- Appriani, I., M. Kosar, L. Rosalina, 2015. Nasib Hutan Alam Indonesia. *Forest Watch Indonesia*. Ed Mar 2015
- Asmelash, F., T. Bekele, E. Birhane. 2016. The Potential Role of Arbuscular Mycorrhizal Fungi in the Restoration of Degraded Lands. *Front. Microbiol.* 7:1095. doi: 10.3389/fmicb.2016.01095
- Balliu, A., G. Sallaku, B. Rewald. 2015. AMF Inoculation Enhances Growth and Improves the Nutrient Uptake Rates of Transplanted, Salt-Stressed Tomato Seedlings. *Sustainability* 7:15967–15981
- Brundrett, M. 1991. Mycorrhizas in Natural Forest. *Advances in Ecological Research*. Vol 21, 171-313
- Chipollini, D., C.M. Rigsby, E.K. Barto. 2012. Microbes as Targets and Mediators of Allelopathy in Plants. *Journal of Chemical Ecology* 38:714-727
- Chulan, H.A., Omar M. 1987. Propagation and Maintenance of VAM Cultures. *Pertanika* 10(3): 271-275
- Corlett, R., R.B. Primack. 2008. Tropical Rainforest Conservation: A Global Perspective. *CARSON* (c026): 442-457
- Cuenza, G., Z.D. Andrade, G. Escalante. 1998. Diversity of Glomalean Spores from Natural, Disturbed and Revegetated Communities Growing on Nutrient-Poor Tropical Soils. *Soil Biology and Biochemistry* 30(6): 711-719
- Daft, M.J., Spencer, D., and Thomas, G.E. 1987. Ineffectivity of Vesicular-Arbuscular Mycorrhizal Inocula after Storage Under Various Environmental Conditions. *Trans. Br. Mycol. Soc.* 88:21-27
- Dennis, R. 1999. A Review of Fire Projects in Indonesia (1982-1998). Centre for International Forestry Research (CIFOR) Bogor Indonesia
- Dhar, P.P., M.A.U. Mridha. 2016. Biodiversity of Arbuscular Mycorrhizal Fungi in Different Trees of Madhupur Forest, Bangladesh. *Journal of Forestry Research* 17(3): 201-205
- Edgar, R.C., B.J. Haas, J.C. Clemente, C. Quince, R. Knight. 2011. UCHIME Improves Sensitivity and Speed of Chimera Detection. *Bioinformatics*, 27, 2194-2200
- Elias, P. and C.M. Tobin. 2011. The Root of The Problem: What's Driving Tropical Deforestation Today. Union of Concerned Scientists, Citizens and Scientists for Environmental Solutions
- Farzaneh, M., H. Vierheilig, A. Lössl, H.P. Kaul. 2011. Arbuscular Mycorrhiza Enhances Nutrient Uptake in Chickpea. *Plant Soil Environment* 57 (10): 465–470

- Ferguson, J.J., Woodhead S.H. 1982. Production of Endomycorrhizal Inoculum. An Increase and Maintenance of Vesicular-Arbuscular Mycorrhizal Fungi. in Methods and Principles of Mycorrhizal Research Ed. Schenck N.C. St. Paul, Minn., Am. Phytopathol. Soc. 47-54
- FWI/GFW. 2002. The State of the Forest: Indonesia. Bogor, Indonesia: Forest Watch Indonesia, and Washington DC: Global Forest Watch
- Gemma, J.N., Koske, R.E. and Habte, M. 2002. Mycorrhizal Dependency of Some Endemic and Endangered Hawaiian Plant Species. American Journal of Botany 89: 337-345
- Habte, M. 2000. Mycorrhizal Fungi and Plant Nutrition. Plant Nutrient Management in Hawaii's Soils, Approaches for Tropical and Subtropical Agriculture. J. A. Silva and R. Uchida, eds. College of Tropical Agriculture and Human Resources, University of Hawaii at Manoa
- Hansen, M.C., S.V. Stehman, and P.V. Potapov. 2010. Quantification of Global Gross Forest Cover Loss. Proceedings of the National Academy of Sciences 107: 8650-8655
- Hansen, M.C., S.V. Stehman, P.V. Potapov, T.R. Loveland, J.R.G. Townshend, R.S. DeFries, K.W. Pittman, B. Arunarwati, F. Stolle, M.K. Steininger, M. Carroll, and C. DiMiceli. 2008. Humid Tropical Forest Clearing From 2000 to 2005 Quantified by Using Multitemporal and Multiresolution Remotely Sensed Data. Proceedings of the National Academy of Sciences 105: 9439-9444
- Heijden, M.G.A.V.D., T. Boller, A. Wiemken, I.R. Sanders. 1998. Different Arbuscular Mycorrhizal Fungal Species are Potential Determinants of Plant Community Structure. Ecology 79(6): 2082-2091
- Hodge, A., Campbell, C.D., Fitter, A.H. 2001. An Arbuscular Mycorrhizal Fungus Accelerated Decomposition and Acquires Nitrogen Directly from Organic Material. Nature 413: 297-299
- Hofsvang, E. 2014. State of The Rainforest 2014. Rainforest Foundation Norway and GRID-Arendal
- Jumpponen, A. and L. M. Egerton-Warbuton. 2004. Mycorrhizal Fungi in Successional Environments: A Community Assembly Model Incorporating Host Plant, Environmental, and Biotic Filters. DK3133\_book.fm Page 139-168
- Kawahara, A., T. Ezawa. 2013. Characterization of Arbuscular Mycorrhizal Fungal Communities with Respect to Zonal Vegetation in Coastal Dune Ecosystem. Oecologia 173: 533-543
- Kivlin, S.N., C.V. Hawkes, K.K. Treseder. 2011. Global Diversity and Distribution of Arbuscular Mycorrhizal Fungi. Soil Biology & Biochemistry 43: 2294-2303
- Krisnawati, H., E. Varis, M. Kallio, M. Kanninen. 2011. *Falcataria moluccana* (L.) Nielsen Ecology, Silviculture, and Productivity. Center for International Forestry Research

- Lekberg, Y., R.T. Koide, J.R. Rohr, L. Aldrich-Wolfe, J.B. Morton. 2007. Role of Niche Restrictions and Dispersal in The Composition of Arbuscular Mycorrhizal Fungal Communities. *Journal of Ecology* 95: 95–105
- Long, E.O. and I. B. Dawid. 1980. Repeated Genes in Eukaryotes. *Annual Review of Biochemistry*. 49:7 27-64
- Lovelock, C.E, K. Anderse, J.B. Morton. 2003. Arbuscular Mycorrhizal Communities in Tropical Forests are Affected by Host Tree Species and Environment. *Oecologia* 135:268–279
- Lovelock, C.E., J.J. Ewel. 2005. Links Between Tree Species, Symbiotic Fungal Diversity and Ecosystem Functioning in Simplified Tropical Ecosystems. *New Phytologist* 167: 219–228
- Luedders, V.D.; Carling, D.E.; Brown, M.F. 1979. Effect of Soybean Plant Growth on Spore Production by *Glomus mosseae*. *Plant Soil*, 53:393-397
- Margono, B.A., P.V. Potapov, S. Turubanova, F. Stolle, M.C. Hansen. 2014. Primary Forest Cover Loss in Indonesia Over 2000–2012. *Nature Climate Change* DOI: 10.1038
- Maulana, A.F. 2015. Isolation and Characterization of Mycorrhizal and Endophytic Fungi from Forest Soils Indonesia. Thesis. Graduate School of Agriculture Sciences Yamagata University. Unpublish Document
- Merryweather, J., A. Fitter. 1998. The Arbuscular Mycorrhizal Fungi of *Hyacinthoides non-scripta* II. Seasonal and Spatial Patterns of Fungal Population. *New Phytologist* 138: 131-142
- Moora, M., M. Öpik, R. Sen, M. Zobel. 2004. Native Arbuscular Mycorrhizal Fungal Communities Differentially Influence The Seedling Performance of Rare and Common *Pulsatilla* Species. *Functional Ecology* 18: 554–562
- Moyersoen, B., P. Becker, I.J. Alexander. 2001. Are Mycorrhizas More Abundant than Arbuscular Mycorrhizas in Tropical Heath Forest. *New Phytologist* 150: 591-599
- Nilsson, R.H., K. Abarenkov, K.H. Larsson, U. Koljalg. 2011. Molecular Identification of Fungi: Rationale, Philosophical Concerns, and The Unite Database. *The Open Applied Informatics Journal*, 2011, 5, (Suppl 1-M9) 81-86
- Öpik, M., M. Moora, J. Liira, M. Zobel. 2006. Composition of Root-Colonizing Arbuscular Mycorrhizal Fungal Communities in Different Ecosystems Around the Globe. *Journal of Ecology* 94: 778-790
- Öpik, M., M. Zobel, J.J. Cantero, J. Davison, J.M. Facelli, I. Hiiesalu, T. Jairus, J.M. Kalwij, K. Koorem, M.E. Leal, J. Liira, M. Metsis, V. Neshataeva. J. Paal, C. Phosri, S. Pölme, Ü. Reier, Ü. Saks, H. Schimann, O. Thiéry, M. Vasar, M. Moora. 2013. Global Sampling of Plant Roots Expands the Described Molecular Diversity of Arbuscular Mycorrhizal Fungi. *Mycorrhiza* 23: 411-430
- Otsamo, Riikka. 2000. Secondary Forest Regeneration Under Fast-Growing Forest Plantations on Degraded *Imperata cylindrica* Grasslands. 19:69-93

- Patrenko, C., J. Paltseva, S. Searle. 2016. Ecological Impacts of Palm Oil Expansion in Indonesia. International Council on Clean Transportation (ICCT) White Paper
- Ramanwong, K. 1998. Species Diversity of Vesicular-Arbuscular Mycorrhizal Fungi of Teak (*Tectona grandis* Linn. F.) and Their Effects on Growth of Teak Seedlings. *Agris: International Information System for The Agricultural Science and Technology*
- Reeves, F.B., D. Wagner, T. Moorman, J. Kiel. 1979. The Role of Endomycorrhizae in Revegetation Practices in the Semi-Arid West. I. A Comparison of Incidence of Mycorrhizae in Severely Disturbed Vs. Natural Environments. *American Journal of Botany*, Vol. 66 No. 1 Page 6-13
- Rodriguez-Echeverria, S., H. Teixeira, M. Correia, S. Timoteo, R. Heleno, M. Öpik, M. Moora. 2016. Arbuscular Mycorrhizal Fungi Communities from Tropical Africa Reveal Strong Ecological Structure. *New Phytologist* 213: 380-390
- Safir, G.R., Coley, S.C., Siquera, J.O., and Carlson, P.S. 1990. Improvement and Synchronization of VA Mycorrhiza Fungal Spore Germination by short-term cold storage. *Soil Biol. Biochem.* 22: 109-111
- Sanders, I.R., J.P. Clapp, E. Wiemken. 1996. The Genetic Diversity of Arbuscular Mycorrhizal Fungi in Natural Ecosystems - A Key to Understanding the Ecology and Functioning of The Mycorrhizal Symbiosis. *New Phytol.* 133: 123-134
- Sanityasa, U. 2015. Isolation of Arbuscular Mycorrhizal and Ectomycorrhizal Fungi from Forest Soils in Indonesia and Screening of Effective Fungi for Tree Growth. Unpublished Document
- Shi, Z.Y., Y. L. Chen, G. Feng, R. J. Liu, P. Christie, X. L. Li. 2006. Arbuscular Mycorrhizal Fungi Associated with The Meliaceae on Hainan island, China. *Mycorrhiza* 16: 81-87
- Simon, L., M. Lalonde, T.D. Bruns. 1992. Specific Amplification of 18S Fungal Ribosomal Genes from Vesicular-Arbuscular Endomycorrhizal Fungi Colonizing Roots. *Applied and Environmental Microbiology* 291-295
- Slik, J.W.F., P.J.A. Keßler, P.C. van Welzen. 2003. *Macaranga* and *Mallotus* Species (Euphorbiaceae) as Indicators for Disturbance in The Mixed Lowland Dipterocarp Forest of East Kalimantan (Indonesia). *Ecological Indicators* 2: 311-324
- Smits, W.T.M. 1994. *Dipterocarpaceae: Mycorrhizae and Regeneration*. Wageningen, Nederland
- Soerianegara, I and Lemmens, R.H.M.J. 1993. *Plant Resources of South-East Asia No 5(1) Timber Trees: Major Commercial Timber*. Pudoc Scientific Publisher. Wageningen
- Sonnenberg, R., A.W. Nolte., D. Tautz. 2007. An Evaluation of LSU rDNA D1-D2 Sequences for Their Use in Species Identification. *Frontiers in Zoology* 4:6
- Stockinger, H., M. Kruger, A. Schüßler. 2010. DNA Barcoding of Arbuscular Mycorrhizal Fungi. *New Phytologist* 187:461-474

- Struble, J.E., Skipper H.D. 1988. Vesicular Arbuscular Mycorrhizal Fungal Spore Production as Influenced by Plant Species. *Plant Soil*, 109:277-280
- Tacconi, L. 2003. Fires in Indonesia: Causes, Costs and Policy Implications. Center for International Forestry Research. Bogor
- Talukdar, N.C., J.J. Germida. 1993. Propagation and Storage of Vesicular-Arbuscular Mycorrhizal Fungi Isolated from Saskatchewan Agriculture Soils. *Canadian Journal of Botany*. Vol 71
- Tawaraya, K., Turjaman, M. 2014. Use of Arbuscular Mycorrhizal Fungi for Reforestation of Degraded Tropical Forest. *Soil Biology, Springer*, 357-373
- Tawaraya, K., Y. Tayaka, M. Turjaman, S.J. Tuah, S.H. Limin, Y. Tamai, J.Y. Cha, T. Wagatsuma, M. Osaki. 2003. Arbuscular Mycorrhizal Colonization of Tree Species Grown in Peat Swamp Forest of Central Kalimantan, Indonesia. *Forest Ecology and Management*. 182: 381-386
- Thomas, S.C., J.L. Baltzer. 2002. Tropical Forests. *Encyclopedia of Life Sciences* Macmillan Publishers Ltd, Nature Publishing Group / [www.els.net](http://www.els.net)
- Torreillas, E., M.M. Alguacil, A. Roldan. 2012. Host Preference of Arbuscular Mycorrhizal Fungi Colonizing Annual Herbaceous Plant Species in Semiarid Mediterranean Prairies. *Journal Applied and Environmental Microbiology* 78(17): 6180-6186
- Trejo, D., I. Barois, W. Sangabriel-Conde. 2016. Disturbance and Land Use Effect on Functional Diversity of The Arbuscular Mycorrhizal Fungi. *Agroforestry System* 90: 265–279
- Treseder, K.K., A. Cross. 2006. Global Distributions of Arbuscular Mycorrhizal Fungi. *Ecosystems* 9: 305-316
- Turjaman, M., Y. Tamai, I.R. Sitepu, E. Santoso, M. Osaki, K. Tawaraya. 2008. Improvement of Early Growth of Two Tropical Peat-Swamp Forest Tree Species *Ploiarium alternifolium* and *Calophyllum hosei* by Two Arbuscular Mycorrhizal Fungi Under Greenhouse Condition. *New Forest*. 36: 1-12
- Violi, H.A., A.F.B. Priego, S.F. Wright, E.E. Prado, J.B. Morton, J.A. Menge, C.J. Lovatt. 2008. Disturbance Changes Arbuscular Mycorrhizal Fungal Phenology and Soil Glomalin Concentrations but not Fungal Spore Composition in Montane Rainforests in Veracruz and Chiapas, Mexico. *Forest Ecology and Management* 254: 276–290
- Wallander, H., Jumpponen, A., Trappe, J. 2015. Mycorrhiza and Primary Succession. *Surtsey Research* (2015) 13: 49–51
- Wang, C., Z. Gu, H. Cui, H. Zhu, S. Fu, Q. Yao. 2015. Differences in Arbuscular Mycorrhizal Fungal Community Composition in Soils of Three Land Use Types in Subtropical Hilly Area of Southern China. *PLoS ONE* 10(6): e0130983. doi:10.1371/journal.pone.0130983
- Wet Tropics. 2011. Tropical Topics an Informative Newsletter About the Environment. Wet Tropics Management Authority

- Wulandari, D., Saridi, W. Cheng, K. Tawaraya. 2016. Arbuscular Mycorrhizal Fungal Inoculation Improves *Albizia saman* and *Falcataria moluccana* Growth in Post-Opencast Coal Mine Field in East Kalimantan, Indonesia. *Forest Ecology and Management* 376: 67-
- Yang, H., Y. Zang, Y. Yuan, J. Tang, X. Chen. 2012. Selectivity by Host Plants Affects the Distribution of Arbuscular Mycorrhizal Fungi: Evidence from ITS rDNA Sequence Metadata. *BMC Evolutionary Biology* 12:50
- Youpensuk, S., S. Lumyong, B. Dell, B. Kerkesem. 2003. Arbuscular Mycorrhizal Fungi in The Rhizosphere of *Macaranga denticulata* Muell. Arg., And Their Effect on The Host Plant. *Agroforestry System* 60(3): 239-246