



DAFTAR PUSTAKA

- Adame, M. F., Wright, S. F., Grinham, A., Lobb, K., Reymond, C. E., & Lovelock, C. E. (2012). Terrestrial-marine connectivity: Patterns of terrestrial soil carbon deposition in coastal sediments determined by analysis of glomalin related soil protein. *Limnology and Oceanography*, 57(5), 1492–1502. <https://doi.org/10.4319/lo.2012.57.5.1492>
- Adillah, A., Widada, J., & Kurniasih, B. (2022). Root Growth and Yield of Rice Plant Associated with Arbuscular Mycorrhizal Symbiosis Under Salt Stress Root Growth and Yield of Rice Plant Associated with Arbuscular Mycorrhizal Symbiosis Under Salt Stress. *IOP Conf. Ser.: Earth Environ. Sci.*, 985. <https://doi.org/10.1088/1755-1315/985/1/012021>
- Aggangan, N. S., Cortes, A. D., & Rea, C. E. (2019). Growth response of cacao (*Theobroma cacao* L.) plant as affected by bamboo biochar and arbuscular mycorrhizal fungi in sterilized and unsterilized soil. *Biocatalysis and Agricultural Biotechnology*, 22(July), 1–11. <https://doi.org/10.1016/j.bcab.2019.101347>
- Agnolucci, M., Battini, F., Cristani, C., & Giovannetti, M. (2015). Diverse bacterial communities are recruited on spores of different arbuscular mycorrhizal fungal isolates. *Biology and Fertility of Soils*, 51(3), 379–389. <https://doi.org/10.1007/s00374-014-0989-5>
- Aguk, J. A., Karanja, N., Schulte-Geldermann, E., Bruns, C., Kinyua, Z., & Parker, M. (2018). Control of bacterial wilt (*Ralstoniasolanacearum*) in potato (*Solanum tuberosum*) using rhizobacteria and arbuscular mycorrhiza fungi. *African Journal of Food, Agriculture, Nutrition and Development*, 18(2), 13371–13387. <https://doi.org/10.18697/ajfand.82.16905>
- Alcaraz, L. D., Peimbert, M., Barajas, H. R., Dorantes-Acosta, A. E., Bowman, J. L., & Arteaga-Vázquez, M. A. (2018). Marchantia liverworts as a proxy to plants' basal microbiomes. *Scientific Reports*, 8(1), 1–12. <https://doi.org/10.1038/s41598-018-31168-0>
- Armanhi, J. S. L., de Souza, R. S. C., Damasceno, N. B., de Araujo, L. M., Imperial, J., & Arruda, P. (2018). A Community-Based Culture Collection for Targeting Novel Plant Growth-Promoting Bacteria from the Sugarcane Microbiome A Community-Based Culture Collection for Targeting Novel Plant Growth-Promoting Bacteria from the Sugarcane Microbiome. *Frontiers in Plant Science*, 8(January), 1–17. <https://doi.org/10.3389/fpls.2017.02191>
- Ayres, E., Steltzer, H., Simmons, B. L., Simpson, R. T., Steinweg, J. M., Wallenstein, M. D., Mellor, N., Parton, W. J., Moore, J. C., & Wall, D. H. (2009). Home-field advantage accelerates leaf litter decomposition in forests. *Soil Biology and Biochemistry*, 41(3), 606–610. <https://doi.org/10.1016/j.soilbio.2008.12.022>



- Bahram, M., Netherway, T., Hildebrand, F., Pritsch, K., Drenkhan, R., Loit, K., Anslan, S., Bork, P., & Tedersoo, L. (2020). Plant nutrient-acquisition strategies drive topsoil microbiome structure and function. *New Phytologist*, 227(4), 1189–1199. <https://doi.org/10.1111/nph.16598>
- Bakker, M. G., Schlatter, D. C., Otto-Hanson, L., & Kinkel, L. L. (2014). Diffuse symbioses: roles of plant–plant, plant–microbe and microbe–microbe interactions in structuring the soil microbiome. *Molecular Ecology*, 23, 1571–1583. <https://doi.org/10.1111/mec.12571>
- Battini, F., Cristani, C., Giovannetti, M., & Agnolucci, M. (2016). Multifunctionality and diversity of culturable bacterial communities strictly associated with spores of the plant beneficial symbiont *Rhizophagus intraradices*. *Microbiol Res.*, February(183), 68–79. <https://doi.org/10.1016/j.micres.2015.11.012>.
- Battini, F., Grønlund, M., Agnolucci, M., Giovannetti, M., & Jakobsen, I. (2017). Facilitation of phosphorus uptake in maize plants by mycorrhizosphere bacteria. *Scientific Reports*, 7(1), 1–11. <https://doi.org/10.1038/s41598-017-04959-0>
- Bidondo, L. F., Colombo, R., Bompadre, J., Benavides, M., Scorza, V., Silvani, V., Pérgola, M., & Godeas, A. (2016). Cultivable bacteria associated with infective propagules of arbuscular mycorrhizal fungi. Implications for mycorrhizal activity. *Applied Soil Ecology*, 105, 86–90. <https://doi.org/10.1016/j.apsoil.2016.04.013>
- Brundrett, M., Bouger, N., Dell, B., Grove, T., & Malajczuk, N. (1996). *Working with Mycorrhizas in Forestry and Agriculture*. ACIAR Monograph.
- Cao, J., Wang, C., Dou, Z., Liu, M., & Ji, D. (2018). Hyphospheric impacts of earthworms and arbuscular mycorrhizal fungus on soil bacterial community to promote oxytetracycline degradation. *Journal of Hazardous Materials*, 341, 346–354. <https://doi.org/10.1016/j.jhazmat.2017.07.038>
- Cesarano, G., De Filippis, F., La Storia, A., Scala, F., & Bonanomi, G. (2017). Organic amendment type and application frequency affect crop yields, soil fertility and microbiome composition. *Applied Soil Ecology*, 120(December 2016), 254–264. <https://doi.org/10.1016/j.apsoil.2017.08.017>
- Chaiya, L., Kumla, J., Suwannarach, N., Kiatsiriroat, T., & Lumyong, S. (2021). Isolation, characterization, and efficacy of actinobacteria associated with arbuscular mycorrhizal spores in promoting plant growth of chili (*Capsicum flutescens* L.). *Microorganisms*, 9(6). <https://doi.org/10.3390/microorganisms9061274>
- Chaouch, F. C., Bouznada, K., Bouras, N., Meklat, A., Tata, S., Mokrane, S., Florence, M., Spröer, C., Klenk, H., & Sabaou, N. (2018). Planomonspora, Saccharothrix and Actinophytocola Genera in Saharan Soils of Algeria: Isolation, Taxonomic Identification and Antagonistic Properties. *J Microbiol*



Biotech Food Sci, 7(5), 505–510.
<https://doi.org/10.15414/jmbfs.2018.7.5.505-510>

Chen, W., Meng, P., Feng, H., & Wang, C. (2020). Effects of Arbuscular Mycorrhizal Fungi on Growth and Physiological Performance of Catalpa bungei. *Forests*, 11(1117), 1–39.

Chi, G. G., Srivastava, A. K., & Wu, Q. S. (2018). Exogenous easily extractable glomalin-related soil protein improves drought tolerance of trifoliate orange. *Archives of Agronomy and Soil Science*, 64(10), 1341–1350.
<https://doi.org/10.1080/03650340.2018.1432854>

Crooke, W. M. (1964). The measurement of the Cation-Exchange Capacity of plant roots. *Plant and Soil*, 21(1), 43–49.

de Souza, R. S. C., Okura, V. K., Armanhi, J. S. L., Jorrín, B., Lozano, N., da Silva, M. J., González-guerrero, M., de Araújo, L. M., Verza, N. C., Bagheri, H. C., Imperial, J., & Arruda, P. (2016). Unlocking the bacterial and fungal communities assemblages of sugarcane microbiome. *Scientific Reports*, June.
<https://doi.org/10.1038/srep28774>

Dong, M., Yang, Z., Cheng, G., Peng, L., Xu, Q., & Xu, J. (2018). Diversity of the Bacterial Microbiome in the Roots of Four Saccharum Species: S. spontaneum, S. robustum, S. barberi, and S. officinarum. *Frontiers in Microbiology*, 9(267).

Dove, N. C., Klingeman, D. M., Carrell, A. A., Cregger, M. A., & Christopher, W. (2021). Fire alters plant microbiome assembly patterns : integrating the plant and soil microbial response to disturbance. *New Phytologist*, 230, 2433–2446.
<https://doi.org/10.1111/nph.17248>

Fanin, N., Lin, D., Freschet, G. T., Keiser, A. D., Augusto, L., Wardle, D. A., & Veen, G. F. (Ciska). (2021). Home-field advantage of litter decomposition from the phyllosphere to the soil. *New Phytologist*, 231, 1353–1358.
<https://doi.org/doi: 10.1111/nph.17475>

Filippidou, S., Wunderlin, T., Junier, T., Jeanneret, N., Dorador, C., Molina, V., Johnson, D. R., & Junier, P. (2016). A combination of extreme environmental conditions favor the prevalence of endospore-forming firmicutes. *Frontiers in Microbiology*, 7(NOV), 1–11. <https://doi.org/10.3389/fmicb.2016.01707>

Franco-Correa, M., Quintana, A., Duque, C., Suarez, C., Rodríguez, M. X., & Barea, J. M. (2010). Evaluation of actinomycete strains for key traits related with plant growth promotion and mycorrhiza helping activities. *Applied Soil Ecology*, 45(3), 209–217. <https://doi.org/10.1016/j.apsoil.2010.04.007>

Frey-Klett, P., Garbaye, J., & Tarkka, M. (2007). The mycorrhiza helper bacteria revisited. *New Phytologist*, 176, 22–36.

Gałazka, A., Gawryjołek, K., Grzadziel, J., & Księżak, J. (2017). Effect of different agricultural management practices on soil biological parameters including



glomalin fraction. *Plant Soil Environ.*, 63(7), 300–306.
<https://doi.org/10.17221/207/2017-PSE>

Galindo-castañeda, T., Brown, K. M., Kuldau, G. A., Roth, G. W., Wenner, N. G., Ray, S., Schneider, H., & Lynch, J. P. (2019). Root cortical anatomy is associated with differential pathogenic and symbiotic fungal colonization in maize. *Plant, Cell and Environment*, 42(11), 2999–3014.
<https://doi.org/10.1111/pce.13615>

Garrido, E., Bennett, A. E., Fornoni, J., & Strauss, S. Y. (2010). The dark side of the mycorrhiza. *Plant Signaling and Behavior*, 5(8), 1019–1021.
<https://doi.org/10.4161/psb.5.8.12292>

Gavande, P. V., Basak, A., Sen, S., Lepcha, K., Murmu, N., Rai, V., Mazumdar, D., Saha, S. P., Das, V., & Ghosh, S. (2021). Functional characterization of thermotolerant microbial consortium for lignocellulolytic enzymes with central role of Firmicutes in rice straw depolymerization. *Scientific Reports*, 11(1), 1–13. <https://doi.org/10.1038/s41598-021-82163-x>

Gillespie, A. W., Farrell, R. E., Walley, F. L., Ross, A. R. S., Leinweber, P., Eckhardt, K. U., Regier, T. Z., & Blyth, R. I. R. (2011). Glomalin-related soil protein contains non-mycorrhizal-related heat-stable proteins, lipids and humic materials. *Soil Biology and Biochemistry*, 43(4), 766–777.
<https://doi.org/10.1016/j.soilbio.2010.12.010>

Giovannetti, M., & Mosse, B. (1980). An evaluation of techniques for measuring vesicular arbuscular mycorrhizal infection in roots. *New Phytologist*, 84, 489–500.

Gryndler, M., Šmilauer, P., Püschel, D., Bukovská, P., Hršelová, H., Hujslová, M., Gryndlerová, H., Beskid, O., Konvalinková, T., & Jansa, J. (2018). Appropriate nonmycorrhizal controls in arbuscular mycorrhiza research: a microbiome perspective. *Mycorrhiza*, 28(5–6), 435–450.
<https://doi.org/10.1007/s00572-018-0844-x>

Gryndler, M., Vosátka, M., Hršelová, H., Chvátalová, I., & Jansa, J. (2002). Interaction between arbuscular mycorrhizal fungi and cellulose in growth substrate. *Applied Soil Ecology*, 19(3), 279–288.
[https://doi.org/10.1016/S0929-1393\(02\)00004-5](https://doi.org/10.1016/S0929-1393(02)00004-5)

Gu, Y., Dong, K., Geisen, S., Yang, W., Yan, Y., Gu, D., Liu, N., Borisjuk, N., Luo, Y., & Friman, V. (2020). The effect of microbial inoculant origin on the rhizosphere bacterial community composition and plant. *Plant Soil*, 452, 105–117.

Guerra, V. A., Beule, L., Mackowiak, C. L., Dubeux, J. C. B., Blount, A. R. S., Wang, X. B., Rowland, D. L., & Liao, H. L. (2021). Soil bacterial community response to rhizoma peanut incorporation into Florida pastures. *Journal of Environmental Quality*, 51(1), 55–65. <https://doi.org/10.1002/jeq2.20307>



- Hao, L., Zhang, Z., Hao, B., Diao, F., Zhang, J., Bao, Z., & Guo, W. (2021). Arbuscular mycorrhizal fungi alter microbiome structure of rhizosphere soil to enhance maize tolerance to La. *Ecotoxicology and Environmental Safety*, 212. <https://doi.org/10.1016/j.ecoenv.2021.111996>
- Hayward, A. C., Fegan, N., Fegan, M., & Stirling, G. R. (2010). Stenotrophomonas and Lysobacter: Ubiquitous plant-associated gamma-proteobacteria of developing significance in applied microbiology. *Journal of Applied Microbiology*, 108(3), 756–770. <https://doi.org/10.1111/j.1365-2672.2009.04471.x>
- Horwath, W. (2007). Carbon Cycling and Formation of Soil Organic Matter. In E. A. Paul (Ed.), *Soil Microbiology, Ecology, and Biochemistry* (Third, pp. 303–340). Elsevier Inc.
- Hu, W., Wei, S., Chen, H., & Tang, M. (2020). Effect of Sterilization on Arbuscular Mycorrhizal Fungal Activity and Soil Nutrient Status. *Journal of Soil Science and Plant Nutrition*, 20, 684–689. <https://doi.org/https://doi.org/10.1007/s42729-019-00156-2>
- Janos, D. P., Scott, J., Aristizábal, C., & Bowman, D. M. J. S. (2013). Arbuscular-Mycorrhizal Networks Inhibit Eucalyptus tetrodonta Seedlings in Rain Forest Soil Microcosms. *PLoS ONE*, 8(2). <https://doi.org/10.1371/journal.pone.0057716>
- Johnson, B. Y. N. C., Graham, J. H., & Smith, F. A. (1997). Functioning of mycorrhizal associations along the mutualism-parasitism continuum. *New Phytologist*, 135, 575–585.
- Johnson, N. C., Wilson, G. W. T., Bowker, M. A., Wilson, J. A., & Miller, R. M. (2010). Resource limitation is a driver of local adaptation in mycorrhizal symbioses. *Proceedings of the National Academy of Sciences of the United States of America*, 107(5), 2093–2098. <https://doi.org/10.1073/pnas.0906710107>
- Joko, T., Koentjoro, M. P., Somowiyarjo, S., Rohman, M. S., Liana, A., & Ogawa, N. (2012). Response of rhizobacterial communities in watermelon to infection with cucumber green mottle mosaic virus as revealed by cultivation-dependent RISA. *Archives of Phytopathology and Plant Protection*, 45(15), 1810–1818. <https://doi.org/10.1080/03235408.2012.707526>
- Juntahum, S., Jongrungklang, N., Kaewpradit, W., Lumyong, S., & Boonlue, S. (2020). Impact of Arbuscular Mycorrhizal Fungi on Growth and Productivity of Sugarcane Under Field Conditions. *Sugar Tech*, 22(3), 451–459. <https://doi.org/10.1007/s12355-019-00784-z>
- Kandeler, E. (2007). Physiological and Biochemical Methods for Studying Soil Biota and Their Function. In Eldor A. Paul (Ed.), *Soil Microbiology, Ecology, and Biochemistry* (Third, pp. 53–84). Elsevier Inc.



- Kang, S. M., Khan, A. L., Hamayun, M., Hussain, J., Joo, G. J., You, Y. H., Kim, J. G., & Lee, I. J. (2012). Gibberellin-producing Promicromonospora sp. SE188 improves Solanum lycopersicum plant growth and influences endogenous plant hormones. *Journal of Microbiology*, 50(6), 902–909. <https://doi.org/10.1007/s12275-012-2273-4>
- Kassambara, A. (2020). *ggpubr: “ggplot2” Based Publication Ready Plots.* <https://cran.r-project.org/package=ggpubr>
- Kataoka, R., & Futai, K. (2009). A new mycorrhizal helper bacterium, Ralstonia species, in the ectomycorrhizal symbiosis between Pinus thunbergii and Suillus granulatus. *Biology and Fertility of Soils*, 45(3), 315–320. <https://doi.org/10.1007/s00374-008-0340-0>
- Kumalawati, Z., Musa, Y., Amin, N., Asrul, L., & Ridwan, I. (2014). Exploration Of Arbuscular Mycorrhizal Fungi From Sugarcane Rhizosphere In South Sulawesi. *International Journal of Scientific and Technology Research*, 3(1), 2013–2015.
- Kusumawati, A., Hanudin, E., Purwanto, B. H., & Nurudin, M. (2022). Root traits of sugarcane cultivated by monoculture system in three orders of soil Root traits of sugarcane cultivated by monoculture system in three orders of soil. *IOP Conf. Ser.: Earth Environ. Sci*, 1005. <https://doi.org/10.1088/1755-1315/1005/1/012002>
- Laranjo, M., Alexandre, A., & Oliveira, S. (2014). Legume growth-promoting rhizobia: An overview on the Mesorhizobium genus. *Microbiological Research*, 169(1), 2–17. <https://doi.org/10.1016/j.micres.2013.09.012>
- Lasudee, K., Tokuyama, S., Lumyong, S., & Pathom-Aree, W. (2017). Mycorrhizal spores associated Lysobacter soli and its plant growth promoting activity. *Chiang Mai Journal of Science*, 44(1), 94–101.
- Lei, S., Xu, X., Cheng, Z., Xiong, J., Ma, R., Zhang, L., Yang, X., Zhu, Y., Zhang, B., & Tian, B. (2019). Analysis of the community composition and bacterial diversity of the rhizosphere microbiome across different plant taxa. *MicrobiologyOpen*, 8(6), 1–10. <https://doi.org/10.1002/mbo3.762>
- Li, K., DiLegge, M. J., Minas, I. S., Hamm, A., Manter, D., & Vivanco, J. M. (2019). Soil sterilization leads to re-colonization of a healthier rhizosphere microbiome. *Rhizosphere*, 12(September), 100176. <https://doi.org/10.1016/j.rhisph.2019.100176>
- Li, M., Hou, S., Wang, J., Hu, J., & Lin, X. (2021). Arbuscular mycorrhizal fungus suppresses tomato (*Solanum lycopersicum* Mill.) Ralstonia wilt via establishing a soil-plant integrated defense system. *Journal of Soils and Sediments*, 21(11), 3607–3619. <https://doi.org/10.1007/s11368-021-03016-8>
- Liu, H., Carvalhais, L. C., Schenk, P. M., & Dennis, P. G. (2017). Effects of jasmonic acid signalling on the wheat microbiome differ between body sites.



Scientific Reports, 7(41766), 1–8. <https://doi.org/10.1038/srep41766>

- Lodish, H., Berk, A., Matsudaira, P., Kaiser, C. A., Krieger, M., Scott, M. P., Zipursky, & Darnell. (2005). *Molecular Cell Biology 5th Edition* (5th ed.). W.H. Freeman and Co.
- Long, L., Zhu, H., Yao, Q., & Ai, Y. (2008). Analysis of bacterial communities associated with spores of Gigaspora margarita and Gigaspora rosea. *Plant and Soil*, 310(1–2), 1–9. <https://doi.org/10.1007/s11104-008-9611-7>
- Lourenço, K. S., Suleiman, A. K. A., Pijl, A., van Veen, J. A., Cantarella, H., & Kuramae, E. E. (2018). Resilience of the resident soil microbiome to organic and inorganic amendment disturbances and to temporary bacterial invasion. *Microbiome*, 6(1), 1–12. <https://doi.org/10.1186/s40168-018-0525-1>
- Mahanta, D., Rai, R. K., Dhar, S., Varghese, E., Raja, A., & Purakayastha, T. J. (2018). Modification of root properties with phosphate solubilizing bacteria and arbuscular mycorrhiza to reduce rock phosphate application in soybean-wheat cropping system. *Ecological Engineering*, 111(November 2017), 31–43. <https://doi.org/10.1016/j.ecoleng.2017.11.008>
- Manzoor, M., Ma, L., Ni, K., & Ruan, J. (2022). Effect of Integrated Use of Rapeseed Cake, Biochar and Chemical Fertilizers on Root Growth, Nutrients Use Efficiency and Productivity of Tea. *Agronomy*, 12(1823), 1–25.
- Meng, L. L., He, J. D., Zou, Y. N., Wu, Q. S., & Kuča, K. (2020). Mycorrhiza-released glomalin-related soil protein fractions contribute to soil total nitrogen in trifoliolate orange. *Plant, Soil and Environment*, 66(4), 183–189. <https://doi.org/10.17221/100/2020-PSE>
- Miransari, M., Bahrami, H. A., Rejali, F., & Malakouti, M. J. (2009). Effects of arbuscular mycorrhiza, soil sterilization, and soil compaction on wheat (*Triticum aestivum* L.) nutrients uptake. *Soil & Tillage Research*, 104, 48–55. <https://doi.org/10.1016/j.still.2008.11.006>
- Mitsui, S., & Ueda, M. (1963). Cation Exchange Capacity of Crop Roots in Relation with Ion Uptake. *Soil Science and Plant Nutrition*, 9(1), 6–12. <https://doi.org/DOI:10.1080/00380768.1963.10431020>
- Moreno, J., López-González, J. A., Arcos-Nievas, M. A., Suárez-Estrella, F., Jurado, M. M., Estrella-González, M. J., & López, M. J. (2021). Revisiting the succession of microbial populations throughout composting: A matter of thermotolerance. *Science of the Total Environment*, 773, 145587. <https://doi.org/10.1016/j.scitotenv.2021.145587>
- Morris, S. J., & Blackwood, C. B. (2007). The Ecology of Soil Organisms. In Eldor A. Paul (Ed.), *Soil Microbiology, Ecology, and Biochemistry* (Third, pp. 195–230). Elsevier Inc.
- Nabila, E. K., Rayya, M. S. A., & El-Sheikh, M. H. (2015). Effect of olive cultivar on growth parameters , mineral constituents and cation – exchange capacity of



- fiberous roots. *International Journal of ChemTech Research*, 8(10), 27–32.
- Nagendra, H. (2002). Opposite trends in response for the Shannon and Simpson indices of landscape diversity. *Applied Geography*, 22(2), 175–186.
- Oksanen, J., Simpson, G. L., Blanchet, F. G., Kindt, R., Legendre, P., Minchin, P. R., O'Hara, R. B., Solymos, P., Henry, M., Stevens, H., Szoecs, E., Wagner, H., Barbour, M., Bedward, M., Bolker, B., Borcard, D., Carvalho, G., Chirico, M., Caceres, M. De, ... Weedon, J. (2022). *vegan: Community Ecology Package. R package version 2.6-2*. <https://cran.r-project.org/package=vegan>
- Ordoñez, Y. M., Fernandez, B. R., Lara, L. S., Rodriguez, A., Uribe-Vélez, D., & Sanders, I. R. (2016). Bacteria with Phosphate Solubilizing Capacity Alter Mycorrhizal Fungal Growth Both Inside and Outside the Root and in the Presence of Native Microbial Communities. *PLoS ONE*, 11(6), 1–11.
- Oruru, M. B., Njeru, E. M., Pasquet, R., & Runo, S. (2018). Response of a wild-type and modern cowpea cultivars to arbuscular mycorrhizal inoculation in sterilized and non-sterilized soil. *Journal of Plant Nutrition*, 41(1), 90–101. <https://doi.org/10.1080/01904167.2017.1381728>
- Ossowicki, A., Raaijmakers, J. M., & Garbeva, P. (2021). Disentangling soil microbiome functions by perturbation. *Environmental Microbiology Reports*, 13(5), 582–590. <https://doi.org/10.1111/1758-2229.12989>
- Putri, A. L., Lisdiyanti, P., & Kusmiati, M. (2018). Identifikasi Aktinomisetes Sedimen Air Tawar Mamasa, Sulawesi Barat Dan Aktivitasnya Sebagai Antibakteri Dan Pelarut Fosfat. *Jurnal Biotehnologi & Biosains Indonesia (JBBI)*, 5(2), 139. <https://doi.org/10.29122/jbbi.v5i2.2953>
- Qin, S., Miao, Q., Feng, W. W., Wang, Y., Zhu, X., Xing, K., & Jiang, J. H. (2015). Biodiversity and plant growth promoting traits of culturable endophytic actinobacteria associated with *Jatropha curcas* L. growing in Panxi dry-hot valley soil. *Applied Soil Ecology*, 93, 47–55. <https://doi.org/10.1016/j.apsoil.2015.04.004>
- Rajan, J., & Anandhan, S. V. (2016). Rhizosphere Influence of nitrogen and potassium on root nutrient and root CEC of different tea cultivars (*Camellia sinensis*, *C. assamica* and *C. assamica* spp. *Lasiocalyx*). *Rhizosphere*, 1, 36–44. <https://doi.org/10.1016/j.rhisph.2016.07.004>
- Raveau, R., Fontaine, J., Hijri, M., & Lounès-Hadj Sahraoui, A. (2020). The Aromatic Plant Clary Sage Shaped Bacterial Communities in the Roots and in the Trace Element-Contaminated Soil More Than Mycorrhizal Inoculation – A Two-Year Monitoring Field Trial. *Frontiers in Microbiology*, 11(December), 1–18. <https://doi.org/10.3389/fmicb.2020.586050>
- Ray, P., Lakshmanan, V., Labb  , J. L., & Craven, K. D. (2020). *Microbe to microbiome: A paradigm shift in the application of microorganisms for sustainable agriculture.* 11(December), 1–15.



<https://doi.org/10.3389/fmicb.2020.622926>

- Roesti, D., Ineichen, K., Braissant, O., Redecker, D., Wiemken, A., & Aragno, M. (2005). Bacteria associated with spores of the arbuscular mycorrhizal fungi *Glomus geosporum* and *Glomus constrictum*. *Applied and Environmental Microbiology*, 71(11), 6673–6679. <https://doi.org/10.1128/AEM.71.11.6673-6679.2005>
- Rotter, P., Maly, S., Sa'n'ka, O., & Kala, T. (2017). *Is glomalin an appropriate indicator of forest soil reactive nitrogen status?* 1–11. <https://doi.org/10.1002/jpln.201700046>
- Rúa, M. A., Antoninka, A., Antunes, P. M., Chaudhary, V. B., Gehring, C., Lamit, L. J., Piculell, B. J., Bever, J. D., Zabinski, C., Meadow, J. F., Lajeunesse, M. J., Milligan, B. G., Karst, J., & Hoeksema, J. D. (2016). Home-field advantage? evidence of local adaptation among plants, soil, and arbuscular mycorrhizal fungi through meta-analysis. *BMC Evolutionary Biology*, 16(122), 1–15. <https://doi.org/10.1186/s12862-016-0698-9>
- Sangwan, S., & Prasanna, R. (2022). Mycorrhizae Helper Bacteria : Unlocking Their Potential as Bioenhancers of Plant – Arbuscular Mycorrhizal Fungal Associations. *Microbial Ecology*, 84, 1–10. <https://doi.org/10.1007/s00248-021-01831-7>
- Schlemper, T. R., Leite, M. F. A., Lucheta, A. R., Shimels, M., Bouwmeester, H. J., van Veen, J. A., & Kuramae, E. E. (2017). Rhizobacterial community structure differences among sorghum cultivars in different growth stages and soils. *FEMS Microbiology Ecology*, 93(8), 1–11. <https://doi.org/10.1093/femsec/fix096>
- Schloss, P. D. (2019). *Shannon*. <https://mothur.org/wiki/shannon/>
- Sepkoski, J. J. (1988). Alpha, beta, or gamma: Where does all the diversity go? *Paleobiology*, 14(3), 221–234.
- Setyaningsih, P. P., Ningsih, F., Rachmania, M. K., Syafitri, W. A., Sari, D. C. A. F., Yabe, S., Yokota, A., Oetari, A., & Sjamsuridzal, W. (2019). Cellulolytic enzyme-producing thermophilic Actinobacteria isolated from the soil of cisolok geysers, West Java, Indonesia. *Biodiversitas*, 20(11), 3134–3141. <https://doi.org/10.13057/biodiv/d201105>
- Shade, A., Peter, H., Allison, S. D., Baho, D. L., Berga, M., Bürgmann, H., Huber, D. H., Langenheder, S., Lennon, J. T., Martiny, J. B. H., Matulich, K. L., Schmidt, T. M., & Handelsman, J. (2012). Fundamentals of microbial community resistance and resilience. *Frontiers in Microbiology*, 3(DEC), 1–19. <https://doi.org/10.3389/fmicb.2012.00417>
- Shannon, C. E. (1948). A Mathematical Theory of Communication. *Bell System Technical Journal*, 27(4), 623–656. <https://doi.org/10.1002/j.1538-7305.1948.tb00917.x>



- Smith, J. L., & Collins, H. P. (2007). Management of Organisms and Their Processes in Soils. In E. A. Paul (Ed.), *Soil Microbiology, Ecology, and Biochemistry* (Third, pp. 471–502). Elsevier Inc.
- Srivastava, A. K., & Srivastava, O. P. (1992). Cation-exchange capacity of roots in relation to response of fertilizer nutrients in salt-affected soil. *Indian Journal of Agricultural Sciences*, 63(3), 200–204.
- Srivastava, M., Kaushik, M. S., & Mishra, A. K. (2016). Linking the Physicochemical Properties with the Abundance and Diversity of Rhizospheric Bacterial Population Inhabiting Paddy Soil Based on a Concerted Multivariate Analysis of PCR-DGGE and. *Geomicrobiology Journal*, 33(10), 894–905. <https://doi.org/10.1080/01490451.2015.1127298>
- Sulistiono, W., Taryono, Yudono, P., & Irham. (2017). Sugarcane roots dynamics inoculated with arbuscular mycorrhizal fungi on dry land. *Journal of Agronomy*, 16(3), 101–114. <https://doi.org/10.3923/ja.2017.101.114>
- Svenningsen, N. B., Watts-Williams, S. J., Joner, E. J., Battini, F., Efthymiou, A., Cruz-Paredes, C., Nybroe, O., & Jakobsen, I. (2018). Suppression of the activity of arbuscular mycorrhizal fungi by the soil microbiota. *ISME Journal*, 12(5), 1296–1307. <https://doi.org/10.1038/s41396-018-0059-3>
- Syafitri, W. A., Ningsih, F., Setyaningsih, P. P., Rachmania, M. K., Sari, D. C. A. F., Yabe, S., Yokota, A., Oetari, A., & Sjamsuridzal, W. (2019). Screening for amylolytic activity and characterization of thermophilic Actinobacteria isolated from a geothermal area in West Java, Indonesia. *Biodiversitas*, 20(7), 1929–1938. <https://doi.org/10.13057/biodiv/d200720>
- Thukral, A. K. (2017). A review on measurement of Alpha diversity in biology. *Agricultural Research Journal*, 54(1), 1–10. <https://doi.org/10.5958/2395-146X.2017.00001.1>
- Toomer, K. H., Chen, X., Naito, M., Mondo, S. J., Bakker, H. C. den, VanKuren, N. W., Lekberg, Y., Morton, J. B., & Pawlowska, T. E. (2015). Molecular evolution patterns reveal life history features of mycoplasma-related endobacteria associated with arbuscular mycorrhizal fungi. *Molecular Ecology*, 24(13), 3485–3500. <https://doi.org/https://doi.org/10.1111/mec.13250>
- Valverde, A., De Maayer, P., Oberholster, T., Henschel, J., Louw, M. K., & Cowan, D. (2016). Specific microbial communities associate with the rhizosphere of Welwitschia mirabilis, a living fossil. *PLoS ONE*, 11(4), 1–11. <https://doi.org/10.1371/journal.pone.0153353>
- van Nuland, M. E., Smith, D. P., Bhatnagar, J. M., Stefanski, A., Hobbie, S. E., Reich, P. B., & Peay, K. G. (2020). Warming and disturbance alter soil microbiome diversity and function in a northern forest ecotone. *FEMS Microbiology Ecology*, 96(7), 1–13. <https://doi.org/10.1093/FEMSEC/FIAA108>



- Veen, G. F., Sundqvist, M. K., & Wardle, D. A. (2015). Environmental factors and traits that drive plant litter decomposition do not determine home-field advantage effects. *Functional Ecology*, 29(7), 981–991. <https://doi.org/10.1111/1365-2435.12421>
- Velásquez, A., Vega-Celedón, P., Fiaschi, G., Agnolucci, M., Avio, L., Giovannetti, M., D'Onofrio, C., & Seeger, M. (2020). Responses of *Vitis vinifera* cv. Cabernet Sauvignon roots to the arbuscular mycorrhizal fungus *Funneliformis mosseae* and the plant growth-promoting rhizobacterium *Ensifer meliloti* include changes in volatile organic compounds. *Mycorrhiza*, 30(1), 161–170. <https://doi.org/10.1007/s00572-020-00933-3>
- Wang, X., Feng, H., Wang, Y., Wang, M., Xie, X., & Chang, H. (2021). Mycorrhizal symbiosis modulates the rhizosphere microbiota to promote rhizobia – legume symbiosis. *Molecular Plant*, 14, 1–14. <https://doi.org/10.1016/j.molp.2020.12.002>
- Wang, X. X., Hoffland, E., Mommer, L., Feng, G., & Kuyper, T. W. (2019). Maize varieties can strengthen positive plant-soil feedback through beneficial arbuscular mycorrhizal fungal mutualists. *Mycorrhiza*, 29, 251–261. <https://doi.org/10.1007/s00572-019-00885-3>
- Wang, X. X., Wang, X., Sun, Y., Cheng, Y., Liu, S., Chen, X., Feng, G., & Kuyper, T. W. (2018). Arbuscular mycorrhizal fungi negatively affect nitrogen acquisition and grain yield of maize in a N deficient soil. *Frontiers in Microbiology*, 9(MAR), 1–10. <https://doi.org/10.3389/fmicb.2018.00418>
- Wang, Y., Wang, C., Gu, Y., Wang, P., Song, W., Ma, J., & Yang, X. (2020). The variability of bacterial communities in both the endosphere and ectosphere of different niches in Chinese chives (*Allium tuberosum*). *PLoS ONE*, 15(1), 1–15. <https://doi.org/10.1371/journal.pone.0227671>
- Wickham, H. (2016). *ggplot2: Elegant Graphics for Data Analysis*. Springer-Verlag.
- Wickham, H., Averick, M., Bryan, J., Chang, W., McGowan, L., François, R., Grolemund, G., Hayes, A., Henry, L., Hester, J., Kuhn, M., Pedersen, T., Miller, E., Bache, S., Müller, K., Ooms, J., Robinson, D., Seidel, D., Spinu, V., ... Yutani, H. (2019). Welcome to the tidyverse. *Journal of Open Source Software*, 4(43), 1686. doi: 10.21105/joss.01686
- Willis, A. D. (2019). Rarefaction , Alpha Diversity , and Statistics. *Frontiers in Microbiology*, 10(October). <https://doi.org/10.3389/fmicb.2019.02407>
- Wright, S. F., & Upadhyaya, A. (1996). Extraction of an abundant and unusual protein from soil and comparison with hypphal protein of arbuscular mycorrhizal fungi. *Soil Science*, 161(9), 575–586.
- Xie, Y., Wright, S., Shen, Y., & Du, L. (2012). Bioactive natural products from Lysobacter. *Natural Product Reports*, 29(11), 1277–1287.



<https://doi.org/10.1039/c2np20064c>

- Yang, Y., He, C., Huang, L., Ban, Y., & Tang, M. (2017). The effects of arbuscular mycorrhizal fungi on glomalin-related soil protein distribution, aggregate stability and their relationships with soil properties at different soil depths in lead-zinc contaminated area. *PloS ONE*, 12(8).
- Yazici, M. A., Asif, M., Tütün, Y., Ortas, I., Ozturk, L., Lambers, H., & Cakmak, I. (2021). Reduced root mycorrhizal colonization as affected by phosphorus fertilization is responsible for high cadmium accumulation in wheat. *Plant Soil*, 468, 19–35.
- Yu, Z., & Mohn, W. W. (2001). Bacterial Diversity and Community Structure in an Aerated Lagoon Revealed Bacterial Diversity and Community Structure in an Aerated Lagoon Revealed by Ribosomal Intergenic Spacer Analyses and 16S Ribosomal DNA Sequencing. *Applied and Environmental Microbiology*, April, 1565–1574. <https://doi.org/10.1128/AEM.67.4.1565>
- Zbíral, J., Čižmár, D., Malý, S., & Obdržálková, E. (2017). Determination of glomalin in agriculture and forest soils by near-infrared spectroscopy. *Plant Soil Environ.*, 63(5), 226–230. <https://doi.org/10.17221/181/2017-PSE>
- Zhang, Z., Zheng, J., & Guang, Y. (2022). Soil mediated local adaptation at the early-life stages of *Stipa breviflora* is context dependent. *Plant and Soil*. <https://doi.org/10.1007/s11104-022-05814-6>
- Zhong, X., Zeng, Y., Wang, S., Sun, Z., Tang, Y., & Kida, K. (2020). Bioresource Technology Insight into the microbiology of nitrogen cycle in the dairy manure composting process revealed by combining high-throughput sequencing and quantitative PCR. *Bioresource Technology*, 301(January), 122760. <https://doi.org/10.1016/j.biortech.2020.122760>
- Zhuang, L., Schnepf, A., Unger, K., Liang, Z., & Bol, R. (2022). Home-Field Advantage of Litter Decomposition Faded 8 Years after Spruce Forest Clearcutting in Western Germany. *Soil Systems*, 6(1), 1–14. <https://doi.org/10.3390/soilsystems6010026>
- Zin, N. H. M., Abidin, Z. A. Z., Malek, N. A., Azizan, N. H., & Darnis, D. S. (2019). Isolation and Structural Characterization of Secondary Metabolites from *Actinophytocola* sp. K4-08 Rare Actinomycete with Potential Biosynthetic Capability. *International Journal of Allied Health Sciences*, 3(3), 815.