

DAFTAR PUSTAKA

- Abdelaal, K., Alaskar, A., & Hafez, Y. (2024). Effect of Arbuscular Mycorrhizal Fungi on Physiological, Bio-Chemical and Yield Characters of Wheat Plants (*Triticum aestivum* L.) Under Drought Stress Conditions. *BMC Plant Biology*, 24(1), 1119.
- Agrindo. (2024). Pembibitan Tanaman: Pengertian, Jenis, dan Teknik Dalam Pertanian. Diakses pada 5 November 2024, dari <https://agrindo.net/pembibitan/>.
- Alfarabbi, M. B. (2024). Analisis Aplikasi Mikoriza pada Kualitas Tanah Karst dan Metabolit Sekunder Mentha Arvensis (Doctoral dissertation, Universitas Islam Indonesia).
- Amrizal, A., Warnita, W., & Armansyah, A. (2021). Pengaruh Pemberian Pupuk Magnesium dan Fungi Mikoriza Arbuskula (FMA) terhadap Fase Vegetatif Tanaman Jagung Manis (*Zea mays saccharata* Sturt) pada Tanah Ultisol. *Jurnal AGROHITA: Jurnal Agroteknologi Fakultas Pertanian Universitas Muhammadiyah Tapanuli Selatan*, 6(1), 1–16.
- Anggraini, T., Tai, A., Yoshino, T., & Itani, T. (2011). Antioxidative Activity and Catechin Content of Four Kinds of Uncaria Gambir Extracts From West Sumatra, Indonesia. *African Journal of Biochemistry Research*, 5(1), 33-38.
- Apriyani, M., Amarullah, F. N. U., & Murtiلاكsono, A. (2020). Pengaruh Kondisi Kapasitas Lapang Yang Berbeda Terhadap Pertumbuhan Vegetatif Varietas Kacang Hijau (*Vigna radiata* L.). In *Agropross: National Conference Proceedings of Agriculture* (pp. 1-9).
- Apriyantono, A., Fardiaz, D., Puspitasari, N.L., Sedarwati, & Budiyanto, S. (1989). *Analisis Pangan (Petunjuk Laboratorium)*. PAU Pangan dan Gizi Institut Pertanian Bogor. Bogor.
- Armansyah, A. (2018). Peranan Fungi Mikoriza Arbuskula (Fma) Indigenus Pada Tanaman Serai Wangi (*Andropogon nardus* L.) Di Lahan Kering (Doctoral dissertation, Universitas Andalas).
- Armansyah, A., Herawati, N., & Kristina, N. (2019). Keanekaragaman Fungi Mikoriza Arbuskula (FMA) di Rizosfer Tanaman Bengkuang (*Pachyrizhus erosus* (L) Mrb) Pada Berbagai Tipe Rotasi Pertanaman. *Jagur Jurnal Agroteknologi*, 3(1), 8-14.
- Arniputri, R. B., Anggraini, R. K., Rahayu, M., & Purnomo, D. (2025). Aktivitas Fisiologis Cincau Hijau Perdu (*Premna oblongifolia*) pada Pemberian Mikoriza dan Biochar Serat Aren. *Jurnal Hortikultura Indonesia (JHI)*, 16(1), 32-38.
- Astiko, W. (2019). Indigenous Mycorrhizal Seed-coating Inoculation on Plant Growth and Yield, and NP-uptake and Availability on Maize sorghum Cropping Sequence in Lombok's Drylands.

- Badan Pusat Statistik Provinsi Sumatera Barat. (2023). *Luas Lahan dan Produksi Gambir Menurut Kabupaten/Kota di Provinsi Sumatera Barat*. Diakses pada 4 November 2024, dari <https://sumbar.bps.go.id/id/statistics-table/2/NTk3IzI%3D/luas-lahan-dan-produksi-gambir-menurut-kabupaten-kota-di-provinsi-sumatera-barat.html>.
- Badan Pusat Statistik Provinsi Sumatera Barat. (2023). *Volume dan Nilai Ekspor Gambir Sumatera Barat*. Diakses pada 4 November 2024, dari <https://sumbar.bps.go.id/id/statistics-table/2/NjYyIzI%3D/volume-dan-nilai-ekspor-gambir-sumatera-barat.html>.
- Bahadur, A., Batool, A., Nasir, F., Jiang, S., Mingsen, Q., Zhang, Q., & Feng, H. (2019). Mechanistic Insights Into Arbuscular Mycorrhizal Fungi-Mediated Drought Stress Tolerance in Plants. *International journal of molecular sciences*, 20(17), 4199.
- Bakhtiar, A 1991. Manfaat Tanaman Gambir. Makalah Penataran Petani dan Pedagang Pengumpul Gambir di Kecamatan Pangkalan Kab. 50 Kota 29-30 November 1991. FMIPA Unand. Padang 23 hal.
- Bengough, A. G., McKenzie, B. M., Hallett, P. D., & Valentine, T. A. (2011). Root Elongation, Water Stress and Mechanical Impedance: a review of limiting stresses and beneficial root tip traits. *Journal of experimental botany*, 62(1), 59-68.
- Boorboori, M. R., & Lackóová, L. (2025). Arbuscular Mycorrhizal Fungi and Salinity Stress Mitigation In Plants. *Frontiers in Plant Science*, 15, 1504970.
- Brady, N. C. (1984). *The Nature and Properties of Soils*.
- Britz, S. J., & Sager, J. C. (1990). Photomorphogenesis and Photoassimilation In Soybean And Sorghum Grown Under Broad Spectrum Or Blue-Deficient Light Sources. *Plant Physiology*, 94(2), 448-454.
- Brundrett, M. C. (2002). Coevolution Of Roots and Mycorrhizas Of Land Plants. *New phytologist*, 154(2), 275-304.
- Brundrett, M. C. (2009). Roots and Mycorrhizas: the missing link in pulse crop production. *Australian Journal of Experimental Agriculture*, 49(3), 328–339.
- Bücking, H., & Kafle, A. (2015). Role Of Arbuscular Mycorrhizal Fungi In The Nitrogen Uptake Of Plants: current knowledge and research gaps. *Agronomy*, 5(4), 587-612.
- Chandrasekaran, M. (2024). The Role Of Arbuscular Mycorrhizal Fungi In Refining Plant Photosynthesis and Water Status Under Drought Stress: a meta-analysis. *Plant, Soil & Environment*, 70(8).
- Chareesri, A., De Deyn, G. B., Sergeeva, L., Polthanee, A., & Kuyper, T. W. (2020). Increased arbuscular mycorrhizal fungal colonization reduces yield loss of rice (*Oryza sativa* L.) under drought. *Mycorrhiza*, 30(2), 315-328.

- Chen, G., Yang, K., Zhang, J., Wang, M., Wang, L., & Xian, J. (2021). Effects Of Succession Stages and Altitudinal Gradient On Leaf Surface Area and Biomass Allocation Of Typical Plants In The Subalpine Of Eastern Tibetan Plateau. *Global Ecology and Conservation*, 27, e01590.
- Comas, L. H., Becker, S. R., Cruz, V. M. V., Byrne, P. F., & Dierig, D. A. (2013). Root Traits Contributing To Plant Productivity Under Drought. *Frontiers in plant science*, 4, 442.
- Cui, H., Mo, C., Chen, P., Lan, R., He, C., Lin, J., ... & Yang, J. (2023). Impact Of Rhizosphere Priming On Soil Organic Carbon Dynamics: insights from the perspective of carbon fractions. *Applied Soil Ecology*, 189, 104982.
- Darwati, I., R. S. M. D. dan H. (2002). Respon Daun Ungu (*G. pictum* L.) terhadap Cekaman Air. *J Industrial Crop Re-Search*, 8(3), 73–75.
- del Rosario, M. H. M., Luis, S. C. J., Lino, S. S., Ricardo, S. P., & Jabin, B. B. J. (2022). Arbuscular mycorrhizal fungi: inoculum dose affects plant development and performance of sugarcane (*Saccharum* spp.) plantlets during acclimatization stage. *Journal of Soil Science and Plant Nutrition*, 22(4), 4847-4856.
- Departemen Kesehatan RI (1995). *Materia Medika Indonesia*. Jilid VI Cetakan I. Direktorat Jendral Pengawasan Obat dan Makanan. Jakarta.
- Deswati, D., Afriani, T., & Salsabila, N. P. (2022). Manfaat Antioksidan dari Tanaman Gambir (*Uncaria Gambir* Roxb) Untuk Kesehatan, Kosmetik dan Pangan (*Literature Review*). *'Afiyah*, 9(2).
- Efendi, R. (2009). Metode dan Karakter Seleksi Toleransi Genotipe Jagung Terhadap Cekaman Kekeringan. Bogor.
- Egerton-Warburton, L. M., & Allen, M. F. (2000). Soil Water Content Influences Arbuscular Mycorrhizal Fungal Growth and Symbiotic Function. *Mycologia*, 92 (5), 809–817.
- Elida, F. (2022). Etnomedisin Gambir Sebagai Obat Tradisional Di Teluk Embun, Nagari Pauh, Kec. Lubuksikaping, Kab. Pasaman Sumatera Barat. *Journal of Science Education Teaching and Learning*, 3(2), 143-152.
- Erdayana, M. (2021). Respon Pertumbuhan Bibit Kakao (*Theobroma cacao*, l) pada Tanah Marginal Yang Diberikan Mikoriza. *Jurnal Penelitian Agrosamudra*, 8(2), 9-18.
- Evelin, H., Kapoor, R., & Giri, B. (2009). Arbuscular Mycorrhizal Fungi In Alleviation Of Salt Stress: a review. *Annals of Botany*, 104(7), 1263–1280. <https://doi.org/10.1093/aob/mcp251>.
- Fitriyah, N. (2016). Analisis Pertumbuhan dan Hasil Tanaman Selada Air 50 (*Nasturtium Officinale*) pada Tingkat Pemberian Air Yang Berbeda dan Dua Macam Bahan Tanam. [Skripsi]. Universitas Brawijaya.
- Flexas, J., Bota, J., Galmés, J., Medrano, H., & Ribas-Carbó, M. (2006). Keeping A Positive Carbon Balance Under Adverse Conditions: Responses Of

Photosynthesis and Respiration To Water Stress. *Physiologia Plantarum*, 127(3), 343-352.

Foth, H. D. (1991). *Fundamentals of Soil Science* (No. Ed. 8, pp. xv+-360).

Gamasari, R., Suryani, H., & Lestari, Y. D. (2022). Efektivitas Level Dosis Fungi Mikoriza Arbuskula (FMA) pada Hasil Produksi Tanaman Jagung (*Zea mays L.*) sebagai Hijauan Pakan. *Jurnal Ilmu Nutrisi dan Teknologi Pakan*, 20(2), 101–108. <https://id.scribd.com/document/693206324/Jurnal-Ilmu-Nutrisi-dan-Teknologi-Pakan-Efektivitas-Level-Dosis-Fungi-Mikoriza>

Gardner, F. P. R. B. P. dan F. L. M. (1991). *Fisiologi Tanaman Budidaya*. Terjemahan Universitas Indonesia Press. Jakarta.

Gardner, F. P., Pearce, R. B., & Mitchell, R. L. (2017). *Physiology of Crop Plants* (No. Ed. 2, pp. 327-pp).

Giri, B., Kapoor, R., & Mukerji, K. G. (2003). Influence of Arbuscular Mycorrhizal Fungi and Salinity on Growth, Biomass and Mineral Nutrition of *Acacia Auriculiformis*. *Biology and Fertility of Soils*, 38, 170–175.

Habisukan, U. H., Musyalina, A., Oktiansyah, R., & Laksono, P. J. (2023). Identifikasi Fungi Endofit yang Diisolasi dari Tanaman Jambu Monyet (*Anacardium occidentale L.*) pada Wilayah Kabupaten Banyuasin. *Konservasi Hayati*, 19(1), 1-11.

Hamdanah, S., Anam, S., & Jamaluddin. (2015). Isolasi dan Identifikasi Senyawa Flavonoid Dari Ekstrak Etanol Buah Belimbing Wuluh (*Averrhoa bilimbi L.*) Dengan Metode Spektrofotometri UV-Vis, *GALENTIKA Journal of Pharmacy*, 1(1):22-34.

Hardiyanti, L. S., Kasim, M., & Dwipa, I. (2025). Analisis Bibit Kelapa Sawit (*Elaeis guineensis Jacq*) Tercekam Kekeringan Terhadap Pemberian Fungi Mikoriza Arbuskula (FMA) Pada Pre Nursery. *Jagur Jurnal Agroteknologi*, 7(1), 1-10.

Hardjowigeno, S. (2012). *Ilmu Tanah Jakarta: Akademika Pressindo. Ilmu Tanah Jakarta: Akademika Pressindo.*

Hasanah, F. (2019). Skrining Fitokimia dan Formulasi Sediaan Masker Peel-Off Ekstrak Etanol Gambir (*Uncaria Gambir* (W. Hunter) Roxb) Secara Perkolasi. *BIOLINK (Jurnal Biol. Lingkung. Ind. Kesehatan)*, 5(2), 114-122.

Hazra, F., Istiqomah, F. N., & Adriani, L. (2021). Aplikasi Pupuk Hayati Mikoriza terhadap Tanaman Bawang Merah (*Allium cepa* var. *aggregatum*) pada Latosol Dramaga. *Jurnal Ilmu Tanah dan Lingkungan*, 23(2), 59-65.

Herawati, N., Syarif, Z., Armansyah, A., & Azizah, N. (2020). Respon Tanaman Sereh Wangi (*Andropogon nardus L.*) Akibat Pemberian Mikoriza Glomus Sp. 1 Dan Tingkat Pemberian Air Yang Berbeda. *Prosiding Webinar Nasional Series: Sistem Pertanian Terpadu dalam Pemberdayaan Petani di Era New Normal*, 89-103.

Hillel, D. (2013). *Introduction to Soil Physics*. Academic press.

- Huang, B., & Jiang, Y. (2024). Physiological and Biochemical Responses of Plants To Drought and Heat Stress. In *Crop Improvement* (pp. 287-313). CRC Press.
- Huang, H., Ullah, F., Zhou, D. X., Yi, M., & Zhao, Y. (2019). Mechanisms of ROS Regulation of Plant Development and Stress Responses. *Frontiers in plant science*, 10, 800.
- Istiqomah, F. N. I., & Novanto, P. R. (2023). Pengaruh Dosis dan Daya Simpan Mikoriza Terhadap Efektivitas dan Infektivitas Pada Bibit Kelapa Sawit Pre Dan Main Nursery. *WARTA Pusat Penelitian Kelapa Sawit*, 28(3), 154-163.
- Joner, E. J., & Jakobsen, I. (1995). Uptake of Phosphorus and Nitrogen From Sparingly Soluble Sources By Mycorrhizal And Non-Mycorrhizal Pea Plants (*Pisum sativum* L.). *Plant and Soil*, 170(2), 231–238.
- Jumin, H. B. (1992). *Ekologi Tanaman : Suatu Pendekatan Fisiologi*. Rajawali Press. Jakarta.
- Kementerian Koordinator Bidang Perekonomian Republik Indonesia, (2021). Komoditas Gambir Indonesia Unggul di Mancanegara. [<https://www.ekon.go.id/publikasi/detail/3116/komoditas-gambir-indonesia-unggul-di-mancanegara>]. Diakses pada tanggal 30 juni 2024.
- Kementerian Pertanian Republik Indonesia. (2012). *Budidaya Gambir*. <https://ppid.pertanian.go.id/doc/1/Budidaya%20Gambir.pdf>.
- Kozlowski, T. T. (1997). Responses of Woody Plants to Flooding and Salinity. *Tree physiology*, 17(7), 490-490.
- Kurniasih, I., & Wulandhany, A. (2009). *Pertumbuhan Akar Bibit Kelapa Sawit Pada Kondisi Kekeringan*. Prosiding Seminar Nasional Perkelapasawitan.
- Kuyper, T. W., Wang, X., & Muchane, M. N. (2021). The Interplay Between Roots and Arbuscular Mycorrhizal Fungi Influencing Water and Nutrient Acquisition and Use Efficiency. *The Root Systems in Sustainable Agricultural Intensification*, 193-220.
- Li, J., Zhou, L., Chen, G., Yao, M., Liu, Z., Li, X., & Chen, X. (2025). Arbuscular Mycorrhizal Fungi Enhance Drought Resistance and Alter Microbial Communities In Maize Rhizosphere Soil. *Environmental Technology & Innovation*, 37, 103947.
- Lopyta, S. (2024). Pengaruh Jenis dan Dosis Fungi Mikoriza Arbuskula (Fma) terhadap Pertumbuhan Bibit Gambir (*Uncaria gambir* (Hunter) Roxb) pada Tanah Bekas Tambang Batu Bara (S2 Thesis, Universitas Andalas).
- Lutfi, A. A., & Nuryani, N. (2023). Dampak Penyusutan Air Tanah Di Kelurahan Bandarharjo Pesisir Kota Semarang. *Indonesian Journal of Geography Education*, 2(1), 46-59.
- Manurung, Y. C., Hanafiah, A. S., & Marbun, P. (2015). Pengaruh Berbagai Kadar Air Tanah pada Efektifitas Mikoriza Arbuskular terhadap Pertumbuhan dan Serapan Hara Bibit Karet (*Hevea brasiliensis* Muell. Arg.) di Rumah Kasa. *Jurnal Agroekoteknologi Universitas Sumatera Utara*, 3(2), 103773.

- Marbun, F. S. M. (2020). Efektivitas Fungi Mikoriza Arbuskular (FMA) dan Waktu Inokulasi Terhadap Akar Wangi (*Vetiveria zizanioides*) pada Kegiatan Bioremediasi di Media Tercemar Minyak Bumi.
- Mergby, D., Hanin, M., & Saidi, M. N. (2021). The Durum Wheat NAC Transcription Factor TtNAC2A Enhances Drought Stress Tolerance in Arabidopsis. *Environmental and Experimental Botany*, 186, 104439.
- Miransari, M., Smith, D. L., & Smith, S. E. (2018). Interaction Between High Inoculum Rates Of Arbuscular Mycorrhizal Fungi and Waterlogging Stress In Wheat. *Plant and Soil*, 427 (1-2), 155–166.
- Munns, R., & Millar, A. H. (2023). Seven Plant Capacities to Adapt to Abiotic Stress. *Journal of Experimental Botany*, 74(15), 4308-4323.
- Nasrul, W., Y. Purnawati., M. Reza., L. Suwita., A. Santo. (2023). Analisis Kelayakan Usaha Tani Gambir Di Nagari Lubuak Alai Kecamatan Kapur I Kabupaten Lima Puluh Kota. *Menara Ilmu*. 17: 121-132.
- Ningsih, E., & Rahayuningsih, S. (2019). Extraction, Isolation, Characterisation and Antioxidant Activity Assay of Catechin Gambir (*Uncaria gambir* (Hunter). Roxb. Al-Kimia, 7(2), 177–188.
- Nogueira, M. A., Cardoso, E. J. B. N., & Freitas, S. M. de. (2005). Effects of Soil Moisture on The Growth and Colonization of Arbuscular Mycorrhizal Fungi in Maize Plants. *Scientia Agricola*, 62 (3), 224–230.
- Novandini, A. (2007). Eksudat Akar Sebagai Nutrisi Trichoderma Harzianium DT38 serta Aplikasinya terhadap Pertumbuhan Tomat. [Skripsi]. Program Studi Biokimia. Institut Pertanian Bogor. Bogor.
- Nuhriawangsa, M. D. P. (2024). Pemberian Mikoriza dan Pupuk Kandang Kambing terhadap Pertumbuhan Biduri (*Calotropis gigantea*).
- Nur, A. A. (2025). Kemampuan Pertumbuhan Berbagai Tanaman Padi Gogo (*Oryza Sativa L.*) Pada Kondisi Cekaman Air (Doctoral dissertation, Universitas Tadulako).
- Nuurachmawati, U., Pujimulyani, D., Tamaroh, S., & Windrayani, E. Antioxidant Compound of *Curcuma mangga* Val. with Variation in Rhizome Parts and Soil Types. *Indonesian Food and Nutrition Progress*, 21(2), 51-60.
- Patel, M., Fatnani, D., & Parida, A. K. (2022). Potassium Deficiency Stress Tolerance in Peanut (*Arachis hypogaea*) Through Ion Homeostasis, Activation of Antioxidant Defense, and Metabolic Dynamics: Alleviatory role of silicon supplementation. *Plant Physiology and Biochemistry*, 182, 55-75.
- Phillips, J. M., & Hayman, D. S. (1970). Improved Procedures for Clearing Roots and Staining Parasitic and Vesicular-Arbuscular Mycorrhizal Fungi for Rapid Assessment of Infection. *Transactions of the British mycological Society*, 55(1), 158-IN18.
- Rehman, A., Memon, R. A., Hameed, M., Naz, N., Shah, A. A., Moussa, I. M., ... & Shaffique, S. (2024). Exploring the Adaptive Mechanisms and Strategies

- of Various Populations of *Sporobolus Ioclados* in Response to Arid Conditions in Cholistan Desert. *BMC Plant Biology*, 24(1), 947.
- Rela, S. (2021). Kaitan Produksi Tanaman Gambir (*Uncaria Gambir* Roxb.) Berdasarkan Ketinggian Tempat Tumbuh Di Kabupaten Lima Puluh Kota.
- Rizki, A., Karti, P. D. M. H., Prihantoro, I., & Yaman, M. A. (2025). Pengaruh Penggunaan Fungi Mikoriza Arbuskula terhadap Produksi dan Karakteristik Fisiologis Lamtoro Mini (*Desmanthus virgatus*) pada Tanah Salin. *Jurnal Ilmu Nutrisi dan Teknologi Pakan*, 23(1), 49-56.
- Rosita, R. (2021). Pertumbuhan dan Kemampuan Fitoremediasi *Brachiaria decumbens* Stapf. yang Diperkaya *Claroideoglossum etunicatum* dan *Bacillus sp.* pada Tanah Bekas Tambang Batu Bara (Doctoral dissertation, IPB University).
- Ruiz-Lozano, J. M. (2003). Arbuscular Mycorrhizal Symbiosis and Alleviation of Osmotic Stress. New Perspectives for Arbuscular Mycorrhizas in Ecosystems, 65, 199–215.
- Ruiz-Lozano, J. M., Porcel, R., Azcon, C., & Aroca, R. (2012). Regulation by Arbuscular Mycorrhizae of The Integrated Physiological Response to Salinity in Plants: New Challenges in Physiological and Molecular Studies. *Journal of Experimental Botany*, 63(11), 4033-4044.
- Sa'id, E. G. (2009). Review Kajian, Penelitian dan Pengembangan Agroindustri Strategis Nasional: kelapa sawit, kakao dan gambir. *Jurnal Teknologi Industri Pertanian*, 19(1), 45-55.
- Salisbury, F.B. dan C.W. Ross. (1995). Fisiologi Tumbuhan. Jilid 3. Penerjemah: Lukman, D.R. dan Sumaryono. Bandung: Penerbit ITB.
- Salsabila, N. P. (2024). Pertumbuhan dan Hasil Tanaman Bawang Merah (*Allium ascalonicum* L.) pada Beberapa Dosis Fungi Mikoriza Arbuskula (Fma) Di Ultisol. Universitas Andalas.
- Sari, D. M., & Siaga, E. (2025). Adaptasi Pertumbuhan Tanaman Tomat pada Kondisi Cekaman Jenuh Air Terhadap Pemberian Pupuk Hayati Mikoriza dan Amelioran: The Growth Adaptation of Tomato Under Water Stress to Application of Mycorrhiza Biofertilizer and Ameliorant. In *Prosiding Seminar Nasional Integrasi Pertanian dan Peternakan* (Vol. 3, No. 1, pp. 76-86).
- Singh, S. K., & Singh, M. (2020). Water Stress Tolerance in Medicinal Plants: Physiological and Molecular Perspectives. In *Plant Tolerance to Environmental Stress* (pp. 195–214). Springer.
- Sitompul, S. M., & Guritno, B. (1995). Analisis Pertumbuhan Tanaman.
- Smith, S. E., & Read, D. J. (2010). Mycorrhizal Symbiosis. Academic press.
- Smith, S., & Read, D. J. (2008). Mycorrhizal Symbiosis Third Edition Introduction. *Mycorrhizal Symbiosis*, 1-9.
- Sylvia, D. M., Fuhrmann, J. J., Hartel, P. G., & Zuberer, D. A. (2005). Principles and Applications of Soil Microbiology (pp. 373-404). Pearson.

- Taiz, L., & Zeiger, E. (2006). *Plant Physiology* Sinauer Associates. Inc., Sunderland, MA.
- Taiz, L., Zeiger, E., Møller, I. M., & Murphy, A. (2015). *Plant Physiology and Development*.
- Tang, H., Hassan, M. U., Feng, L., Nawaz, M., Shah, A. N., Qari, S. H., & Miao, J. (2022). The Critical Role of Arbuscular Mycorrhizal Fungi to Improve Drought Tolerance and Nitrogen Use Efficiency in Crops. *Frontiers in Plant Science*, 13, 919166.
- Thorpe, JF., Whiteley, MA. 1921. Thorpe's Dictionary of Applied Chemistry. Fourth edition, Vol. II. Longmans, Green and Co. London, 434-438.
- Wang, J., Li, L., Xie, J., Xie, L., Effah, Z., Luo, Z., & Nizamani, M. M. (2024). Effects of Nitrogen Fertilization on Soil CO₂ Emission and Bacterial Communities in Maize Field on The Semiarid Loess Plateau. *Plant and Soil*, 503(1), 123-139.
- Widyaningrum, E. D. (2023). Pengaruh Dosis Mikoriza dan Volume Penyiraman terhadap Pertumbuhan dan Hasil Tanaman Tomat Ceri (*Solanum Lycopersicum* Var. *Cerasiforme*) (Doctoral dissertation, Institut Pertanian Stiper Yogyakarta).
- Widyati, E. (2019). Intervensi Manusia terhadap Komunitas Rhizosfir: Review (Human Disturbance on Rhizosphere Communities: Review). *Jurnal Manusia dan Lingkungan*, 26(1), 10-19.
- Yusnaweti, M. P. (2016). Pengaruh Pengaplikasian Kompas Ampas Daun Gambir dan Cendawan Mikoriza Arbuskula Terhadap Pertumbuhan Tanaman Gambir (*Uncaria gambir* roxb). *Menara Ilmu: Jurnal Penelitian dan Kajian Ilmiah*, 10(10).
- Zainal, A., Anwar, A., & Yunita, R. (2023). The Effects of Several Concentrations of BAP and Source of Explants to Gambier Shoot Induction (*Uncaria gambier* (Hunter) Roxb). In *IOP Conference Series: Earth and Environmental Science* (Vol. 1160, No. 1, p. 012021). IOP Publishing.
- Zaman, F., Hassan, M. U., Khattak, W. A., Ali, A., Awad, M. F., & Chen, F. S. (2024). The Pivotal Role of Arbuscular Mycorrhizal Fungi in Enhancing Plant Biomass and Nutrient Availability Under Drought Stress Conditions: A global meta-analysis. *Science of The Total Environment*, 955, 176960.
- Zeyliger, A., & Ermolaeva, O. (2025). Development of Geophysical Moisture Measurement Methods for Soil Moisture Mapping at Agricultural Field Scale within the Framework of Digital Irrigation. *International Journal of Agriculture and Biosciences*, 14(3), 358–364.
- Zhou, Z., Li, J., Gao, Y., Wang, X., Wang, R., Huang, H., & Wang, P. (2024). Research on Drought Stress in *Medicago sativa* L. from 1998 to 2023: a bibliometric analysis. *Frontiers in Plant Science*, 15, 1406256.