

DAFTAR PUSTAKA

- Abbasi, A.R., Sarvestani, R., Mohammadi, B., and Baghery, A. 2014. Drought Stress-Induced Changes at Physiological and Biochemical Levels in Some Common Vetch (*Vicia sativa* L.) Genotypes. *Journal of Agricultural Science and Technology*, 16: 505-516.
- Abdallah, M.M., Abd El-Monem, A.A., Hassanein, R.A., and ElBassiouny, H.M.S. 2013. Response of Sunflower Plant to the Application of Certain Vitamins and Arbuscular Mycorrhizal Under Different Water Regimes. *Australian Journal of Basic Applied Science*, 7(2): 915-932.
- Abd-Elghany, S.E.A., Moustafa, A.A., Gomaa, N.H., and Hamed, B.A. 2021. Mycorrhizal Impact on *Ocimum basilicum* Grown Under Drought Stress. *Journal of Basic and Applied Sciences*, 10: 1-13.
- Abdel-Salam, E., Alatar, A., and El-Sheikh, M.A. 2018. Inoculation with Arbuscular Mycorrhizal Fungi Alleviates Harmful Effects of Drought Stress on Damask Rose. *Saudi Journal of Biological Sciences*, 25: 1772–1780.
- Abdillah, L., Septian, M.H., dan Mikael, S. 2021. Potensi Pemanfaatan Mikoriza Arbuskula (AM) pada Lahan Hijauan Pakan. *Journal of Livestock Science and Production*, 5(1): 362-370.
- Ackah, E. dan Kotei, R. 2021. Effect of Drought Length on the Performance of Cabbage (*Brassica oleracea* var *capitata*) in the Forest-Savannah Transition Zone, Ghana. *Plant Physiology Reports*, 26(1): 74-83.
- Adejumo, S.A., Oniosun, B., Akpoilih, O.A., Adeseko, A., and Arowo, D.O. 2021. Anatomical Changes, Osmolytes Accumulation and Distribution in the Native Plants Growing on Pb-Contaminated Sites. *Environmental Geochemistry and Health*, 43: 1537-1549.
- Adelia, P., Nurcahyani, E., dan Tundjung, T. 2020. Analisis Kandungan Klorofil Total dan Karbohidrat Terlarut Planlet Sawi Caisim (*Brassica rapa* L.) Resisten terhadap Cekaman Kekeringan Secara In Vitro dengan Poly Ethylene Glycol (PEG) 6000. *Bioeksperimen*, 20(20): 10-20.
- Agustinur., Yusran., dan Haros, W. 2018. Peningkatan Kemampuan Tumbuh Tanaman Jagung (*Zea mays* L.) pada Kondisi Cekaman Kekeringan oleh Jamur Mikoriza Arbuskular. *Biocелеbes*, 12(3): 23-29.

- Ahanger, M.A., Tomar, N.S., Tittal, M., Argal, S., and Agarwal, R. 2017. Plant Growth Under Water/Salt Stress: ROS Production; Antioxidants and Significance of Added Potassium Under Such Conditions. *Physiology and Molecular Biology of Plants*, 23: 731-744.
- Ahmed, I.M., Cao, F., Han, Y., Nadira, U.A., Zhang, G., and Wu, F. 2013. Differential Changes in Grain Ultrastructure, Amylase, Protein and Amino Acid Profiles Between Tibetan Wild and Cultivated Barleys Under Drought and Salinity Alone and Combined Stress. *Food Chemistry*, 141(3): 43-50.
- Ai, N.S. dan Banyo, Y. 2011. Konsentrasi Klorofil Daun sebagai Indikator Kekurangan Air pada Tanaman. *Jurnal Ilmiah Sains*, 11(2): 166-173.
- Ai, N.S. dan Lenak, A.A. 2014. Penggulungan Daun pada Tanaman Monokotil Saat Kekurangan Air (Leaf Rolling in Monocotyledon Plants Under Water Deficit). *Jurnal Bios Logos*, 4(2): 48-55.
- Alam, M.Z., Choudhury, T.R., and Mridha, M.A.U. 2023. Arbuscular Mycorrhizal Fungi Enhance Biomass Growth, Mineral Content, and Antioxidant Activity in Tomato Plants Under Drought Stress. *Journal of Food Quality*, 2023: 1-14.
- Alam, M.Z., Hoque, M.A., Ahammed, G.J., and Carpenter-Boggs, L. 2020. Effects of Arbuscular Mycorrhizal Fungi, Biochar, Selenium, Silica Gel, and Sulfur on Arsenic Uptake and Biomass Growth in *Pisum sativum* L. *Emerging Contaminants*, 6: 312-322.
- Al-Arjani, A.F., Hashem, A., and Abd-Allah, E.F. 2020. Arbuscular Mycorrhizal Fungi Modulates Dynamics Tolerance Expression to Mitigate Drought Stress in *Ephedra foliata* Boiss. *Saudi Journal of Biological Sciences*, 27(1): 380-394.
- Al-Babili, S. and Bouwmeester, H.J. 2015. Strigolactones, A Novel Carotenoid-Derived Plant Hormone. *Annual Review of Plant Biology*, 66: 161-186.
- Al-Hmoud, G. dan Al-Momany, A. 2017. Effect of Four Mycorrhizal Products on Squash Plant Growth and its Effect on Physiological Plant Elements. *Advances in Crop Science and Technology*, 5(1): 1-6.
- Alifah, S., Nurfida, A., dan Herawan, A. 2019. Pengolahan Sawi Hijau Menjadi Mie Hijau yang Memiliki Nilai Ekonomis Tinggi di Desa Sukamanis Kecamatan Kadudampit Kabupaten Sukabumi. *Journal of Empowerment Community*, 1(2): 52-58.

- Alkobaisy, J.S. 2022. Factors Affecting Mycorrhizal Activity. Arbuscular Mycorrhizal Fungi in Agriculture. IntechOpen.
- Alwhibi, M.S., Khalil, M.I., Ibrahim, M.M., El-Gaaly, G.A., and Sultan, A.S. 2017. Potential Antitumor Activity and Apoptosis Induction of *Glossostemon bruguieri* Root Extract against Hepatocellular Carcinoma Cells. *Hindawi*, 2017: 1-15.
- Amerian, M.R., Stewart, W.S., and Griffiths, H. 2001. Effect of Two Species of Arbuscular Mycorrhizal Fungi on Growth, Assimilation and Leaf Water Relations in Maize (*Zea mays*). *Aspects of Applied Biology*, 63: 73-76.
- Amir, H., Cavaloc, Y., Laurent, A., Pagand, P., Gunkel, P., and Lemestre, M. 2019. Arbuscular Mycorrhizal Fungi and Sewage Sludge Enhance Growth and Adaptation of *Metrosideros Laurifolia* on Ultramafic Soil in New Caledonia: A Field Experiment. *Science of the Total Environment*, 651: 334-343.
- Amiri, R., Nikbakht, A., and Etemadi, N. 2015. Alleviation of Drought Stress on Rose Geranium [*Pelargonium graveolens* (L.) Herit.] in Terms of Antioxidant Activity and Secondary Metabolites by Mycorrhizal Inoculation. *Scientia Horticulturae*, 197: 373-380.
- Anderson, R., Keshwani, D., Guru, A., Yamg, H., Irmak, S., and Subbiah, J. 2018. An Integrated Modeling Framework for Crop and Biofuel Systems Using the DSSAT and GREET Models. *Environmental Modelling & Software*, 108: 40-50.
- Anosheh, H.P., Moucheshi, A.S., Pakniyat, H., dan Pessarakli, M. 2018. Stomatal Responses to Drought Stress. 1: 24-40.
- Apel, K. and Hirt, H. 2004. Reactive Oxygen Species: Metabolism, Oxidative Stress, and Signal Transduction. *Annual Review of Plant Biology*, 55: 373-399.
- Arjani, A.B.F., Hashem, A., and Elsayed, F.A.A. 2020. Arbuscular Mycorrhizal Fungi Modulates Dynamics Tolerance Expression to Mitigate Drought Stress in *Ephedra foliata* Boiss. *Saudi Journal of Biological Sciences*, 27(1): 380-394.
- Asada, K. 2006. Production and Scavenging of Reactive Oxygen Species in Chloroplasts and Their Functions. *Plant Physiology*, 141: 391-396.

- Asghari, M.T. 2022. Effect of Seed Inoculation With Mycorrhizal Fungi and Leaf Application of Amino Acid on Some Qualitative and Herbaceous Properties of Pot Marigold. *Iranian Journal of Seed Science and Research*, 9(3): 57-71.
- Aslanpour, M., Banch, H.D., Tehranifar, A., and Shoor, M. 2019. Effects of Water Stress on Growth Traits of Roots and Shoots of the White Seedless Grape. *International Transaction Journal of Engineering, Management, and Applied Sciences and Technologies*, 10(2): 169-181.
- Asrar, A.A., Abdel-Fattah, G.M., and Elhindi, K.M. 2012. Improving Growth, Flower Yield, and Water Relations of Snapdragon (*Antirrhinum majus* L.) Plants Grown Under Well-Watered and Water-Stress Conditions Using Arbuscular Mycorrhizal Fungi. *Photosynthetica*, 50: 305-316.
- Augé, R.M. 2001. Water Relations, Drought and Vesicular-Arbuscular Mycorrhizal Symbiosis. *Mycorrhiza*, 11: 3-42.
- Augé, R.M., Toler, H.D., and Saxton, A.M. 2014. Arbuscular Mycorrhizal Symbiosis Alters Stomatal Conductance of Host Plants More Under Drought than Under Amply Watered Conditions: A Meta-Analysis. *Mycorrhiza*, 25: 13-24.
- Augé, R.M., Toler, H.D., and Saxton, A.M. 2016. Mycorrhizal Stimulation of Leaf Gas Exchange in Relation to Root Colonization, Shoot Size, Leaf Phosphorus and Nitrogen: A Quantitative Analysis of the Literature Using Meta-Regression. *Frontiers in Plant Science*, 7: 1084.
- Ayub M, Ashraf MY, Kausar A. 2021. Growth and Physio-Biochemical Responses of Maize (*Zea mays* L.) to Drought and Heat Stresses. *Plant Biosystems*, 155(3): 535-542.
- Azcon-Aguilar, C. and Barea, J.M. 2015. Nutrient Cycling in the Mycorrhizosphere. *Journal of Soil Science and Plant Nutrition*, 15: 372-396.
- Badan Pusat Statistik dan Direktorat Jenderal Hortikultura. 2020. Produksi dan Impor Sayuran di Indonesia.
- Baier, M., Kandlbinder, A., Golldack, D., and Dietz, K. 2005. Oxidative Stress and Ozone: Perception, Signaling and Response. *Plant, Cell & Environment*. 28: 1012-1020.
- Bailey-Serres, J. and Voesenek, L.A.C.J. 2008. Flooding Stress: Acclimations and Genetic Diversity. *Annual Review of Plant Biology*, 59: 313-339.

- Bakr, J., Pék, Z., Helyes, L., and Posta, K. 2018. Mycorrhizal Inoculation Alleviates Water Deficit Impact on Field-Grown Processing Tomato. *Polish Journal of Environmental Studies*, 27:1949-1958.
- Balestrini, R., Brunetti, C., Chitarra, W., and Nerva, L. 2020. Photosynthetic Traits and Nitrogen Uptake in Crops: Which is the Role of Arbuscular Mycorrhizal Fungi?. *Plants*, 9(9): 1105.
- Balliu, A., Sallaku, G., and Rewald, B. 2015. AMF Inoculation Enhances Growth and Improves the Nutrient Uptake Rates of Transplanted, Salt-Stressed Tomato Seedlings. *Sustainability*, 7: 15967-15981.
- Bao, X., Wang, Y., Li, S., and Olsson, P.A. 2019. Arbuscular Mycorrhizal Under Water Carbon-Phosphorus Exchange Between Rice and Arbuscular Mycorrhizal Fungi Under Different Flooding Regimes. *Soil Biology and Biochemistry*, 129: 169-177.
- Bashir, S.S., Hussain, A., Hussain, S.J., Wani, O.A., Nabi, S.Z., Dar, N.A., Baloch, F.S., and Mansoor, S. 2021. Plant Drought Stress Tolerance: Understanding Its Physiological, Biochemical and Molecular Mechanisms. *Biotechnology and Biotechnological Equipment*, 35(1): 1912-1925.
- Basri, A.H.H. 2018. Kajian Peranan Mikoriza dalam Bidang Pertanian. *Agrica Ekstensia*, 12(2): 74-78.
- Basu, S., Ramegowda, V., Kumar, A., and Pereira, A. 2016. Plant Adaptation to Drought Stress [Version 1; Referees: 3 Approved. *Cross Mark*, 1-10.
- Bates, L.S., Waldren, R.P., and Teare, I.D. 1973. Rapid Determination of Free Proline for Water Stress Studies. *Plant and Soil*, 39: 205-207.
- Becskei, A. and Rahaman, S. 2022. The Life and Death of RNA Across Temperatures. *Computational and Structural Biotechnology Journal*, 20: 4325-4336.
- Begum, N., Qin, C., Ahanger, M.A., Raza, S., Khan, M.I., Ashraf, M., Ahmed, N., and Zhang, L. 2019. Role of Arbuscular Mycorrhizal Fungi in Plant Growth Regulation: Implications in Abiotic Stress Tolerance. *Frontiers in Plant Science*, 10: 1-15.

- Behrooz, A., Vahdati, K., Rejali, F., Lotf, M., Sarikhani, S., and Leslie, C. 2019. Arbuscular Mycorrhizal and Plant Growth-Promoting Bacteria Alleviate Drought Stress in Walnut. *HortScience*, 54(6): 1087-1092.
- Beltrano, J. and Ronco, M.G. 2008. Improved Tolerance of Wheat Plants (*Triticum aestivum* L.) to Drought Stress and Rewatering by the Arbuscular Mycorrhizal Fungus *Glomus Claroideum*: Effect on Growth and Cell Membrane Stability. *Brazilian Journal of Plant Physiology*, 20(1): 29-37.
- Benaffari, W., Boutasknit, A., Anli, M., Mokhtar, M.A.E., Rahou, Y.A., Laouane, R.B., Ahmed, H.B., Mitsui, T., Baslam, M., and Meddich, A. 2022. The Native Arbuscular Mycorrhizal Fungi and Vermicompost-Based Organic Amendments Enhance Soil Fertility, Growth Performance, and the Drought Stress Tolerance of Quinoa. *Plants*, 11: 1-27.
- Bernaola, L., Cange, G., Way, M.O., Gore, J., Hardke, J., and Stout, M. 2018. Natural Colonization of Rice by Arbuscular Mycorrhizal Fungi in Different Production Areas. *Rice Science*, 25: 169-174.
- Bhargava, S. and Sawant, K. 2013. Drought Stress Adaptation: Metabolic Adjustment and Regulation of Gene Expression. *Plant Breeding*, 132(1): 21-32.
- Bhatla, S.C. and Lal, M.A. 2018. *Plant Physiology, Development, and Metabolic*. Singapore: Springer Nature Singapore Pte Ltd.
- Bitterlich, M., Roupael, Y., Graefe, J., and Franken, P. 2018. Arbuscular Mycorrhizas: A Promising Component of Plant Production Systems Provided Favorable Conditions for Their Growth. *Frontiers in Plant Science*, 9: 13-29.
- Blatt, M.R. 2014. Focus on Water. *Plant Physiology*, 164(4): 1553-1555.
- Bona, E., Cantamessa, S., and Massa, N. 2016. Arbuscular Mycorrhizal Fungi and Plant Growth-Promoting Pseudomonads Improve Yield, Quality and Nutritional Value of Tomato: A Field Study. *Mycorrhiza*, 27: 1-11.
- Bonfante, P. and Genre, A. 2010. Mechanisms Underlying Beneficial Plant–Fungus Interactions in Mycorrhizal Symbiosis. *Nature Communication*, 48(1): 1-11.
- Boutasknit, A., Baslam, M., Mokhtar, M.A.E., Laouane, R.B., Mitsui, T., and Meddich, A. 2020. Arbuscular Mycorrhizal Fungi Mediate Drought Tolerance and Recovery in Two Contrasting Carob (*Ceratonia siliqua* L.) Ecotypes by

Regulating Stomatal, Water Relations, and (In) Organic Adjustments. *Plants*, 9(1): 1-19.

Bowles, T. M., Jackson, L.E., and Cavagnaro, T.R. 2018. Mycorrhizal Fungi Enhance Plant Nutrient Acquisition and Modulate Nitrogen Loss with Variable Water Regimes. *Global Change Biology*, 24: 171-182.

Brady, N.C. 2002. *The Nature and Properties of Soils*. New Delhi: Prentice Hall of India.

Brewer, C.A. 1992. Responses by Stomata on Leaves to Microenvironmental Conditions. In C. A. Goldman (Ed.), *Tested Studies for Laboratory Teaching. Proceedings of the 13th Workshop/Conference of the Association for Biology Laboratory Education (ABLE)*.

Bucher, M. 2007. Functional Biology Of Plant Phosphate Uptake At Root And Mycorrhizal Interfaces. *New Phytologist*, 173:11-26.

Burritt, D.J. 2012. Proline and the Cryopreservation of Plant Tissues: Functions and Practical Applications. *Current Frontiers in Cryopreservation*, 415-426.

Byregowda, R., Prasad, S.R., Oelmuller, R., Nataraja, K.N., and Kumar, M.K.P. 2022. R Is Endophytic Colonization of Host Plants a Method of Alleviating Drought Stress? Conceptualizing the Hidden World of Endophytes. *International Journal of Molecular Sciences*, 23(16): 1-31.

Cahyani, N.K.M., Nurhatika, S., dan Muhibuddin, A. 2014. Eksplorasi Mikoriza Vesikular Arbuskular (MVA) Indigenus pada Tanah Aluvial di Kabupaten Pamekasan Madura. *Jurnal Sains dan Seni Pomits*, 3(1): 22-25.

Cambaba, S. dan Maryani. 2016. Karakter Anatomis Daun Kedelai (*Glycine max* (L.) Merril) ‘Grobogan’ Hasil Perlakuan Kekeringan dan Mulsa Jerami. *Prosiding Seminar Nasional*, 2(1): 881-896.

Card, S., Johnson, L., Teasdale, S., and Caradus, J. 2016. Deciphering Endophyte Behaviour: The Link Between Endophyte Biology and Efficacious Biological Control Agents. *FEMS Microbiology Ecology*, 92.

Carvalho, M.H. 2008. Drought Stress and Reactive Oxygen Species: Production, Scavenging and Signaling. *Plant Signaling & Behavior*, 3: 156-165.

- Chandrasekaran, M., Chanratana, M., Kim, K., Seshadri, S., and Sa, T. 2019. Impact of Arbuscular Mycorrhizal Fungi on Photosynthesis, Water Status, and Gas Exchange of Plants Under Salt Stress—A Meta-Analysis. *Frontiers in Plant Science*, 10: 1-10.
- Chandrasekaran, M., Sonia, B., Hu, S., Oh, S. H., and Sa, T. 2014. A Meta-Analysis of Arbuscular Mycorrhizal Effects on Plants Grown Under Salt Stress. *Mycorrhiza*, 24: 611-625.
- Chaves, M.M., Costa, J.M., and Saibo, N.J.M. 2011. Recent Advances in Photosynthesis Under Drought and Salinity. *Advances in Botanical Research*, 57: 49-104.
- Chen J., Zhang H., Zhang X., and Tang M. 2017. Arbuscular Mycorrhizal Symbiosis Alleviates Salt Stress in Black Locust Through Improved Photosynthesis, Water Status, and K⁺/Na⁺ Homeostasis. *Frontiers in Plant Science*, 8: 17-39.
- Chen, M., Arato, M., Borghi, L., Nouri, E., and Didier, R. 2018. Beneficial Services of Arbuscular Mycorrhizal Fungi - From Ecology to Application. *Frontiers in Plant Science*, 9: 1270.
- Chen, W., Meng, P., Feng, H., and Wang, C. 2020. Effects of Arbuscular Mycorrhizal Fungi on Growth and Physiological Performance of *Catalpa bungei* C.A. Mey. Under Drought Stress. *Forests*, 11: 1117.
- Cheng, S., Zou, Y.N., Kuca, K., Hashem, A., Abd-Allah, E.F., and Wu, Q.S. 2021. Elucidating the Mechanism Underlying Enhanced Drought Tolerance in Plants Mediated by Arbuscular Mycorrhizal Fungi. *Frontiers in Microbiology*, 1-16.
- Chitarra, W., Pagliarani, C., Maserti, B., Lumini, E., Siciliano, I., Cascone, P., Schubert, A., Gambino, G., Balestrini, R., and Guerrieri, E. 2016. Insights on the Impact of Arbuscular Mycorrhizal Symbiosis on Tomato Tolerance to Water Stress. *Journal of Plant Physiology*, 171: 1009-1023.
- Chun, S.C., Paramasivan, M., and Chandrasekaran, M. 2018. Proline Accumulation Influenced by Osmotic Stress in Arbuscular Mycorrhizal Symbiotic Plants. *Frontiers in Microbiology*, 1-3.
- Colmer, T.D. and Greenway, H. 2011. Ion Transport in Seminal and Adventitious Roots of Cereals During O₂ Deficiency. *Journal of Experimental Botany*, 62: 39-57.

- Cosme, M., Fernandez, I., Van, D.H., Marcel, G.A., and Pieterse, C.M.J. 2018. Non-Mycorrhizal Plants: The Exceptions that Prove the Rule. *Trends in Plant Science*, 23(7): 577-587.
- Cozzolino, V., Di Meo, V., and Piccolo, A. 2013. Impact of Arbuscular Mycorrhizal Fungi Applications on Maize Production and Soil Phosphorus Availability. *Journal of Geochemical Exploration*, 129: 40-44.
- Damaiyanti, D.R.R., Aini, N., dan Soelistyono, R. 2015. Effects of Arbuscular Mycorrhizal Inoculation on Growth and Yield of Tomato (*Lycopersicum esculentum* Mill.) Under Salinity Stress. *Journal of Degraded and Mining Lands Management*, 3(1): 447-452.
- Dar, M.I., Naikoo, M.I., Rehman, F., Naushin, F., and Khan, F.A. 2016. Proline Accumulation in Plants: Roles in Stress Tolerance and Plant Development. In *Osmolytes and Plants Acclimation to Changing Environment: Emerging Omics Technologies*; Springer: Berlin/Heidelberg, Germany, 155-166.
- Dariah, A. dan Heryani, N. 2014. Pemberdayaan Lahan Kering Suboptimal untuk Mendukung Kebijakan Diversifikasi dan Ketahanan Pangan. *Jurnal Sumberdaya Lahan Edisi Khusus*, 1-16.
- De Col, V., Fuchs, P., Nietzel, T., Elasser, M., Voon, C.P., Candeo, A., Seeliger, I., Fricker, C.G., Meller, I.M., Bassi, A., Boon, L.L., Marco, Z., Meyer, A.J., and Alex, C., Wagner, S., and Schwarzlender, M. 2017. ATP Sensing in Living Plant Cells Reveals Tissue Gradients and Stress Dynamics of Energy Physiology. *eLife*, 25: 6: 1-29.
- De Oliveira, V.C. and Joly, C.A. 2010. Flooding Tolerance of *Calophyllum brasiliense* Camb. (Clusiaceae): Morphological, Physiological and Growth Responses. *Trees*, 24: 185-193.
- Dewi, S.M., Yuwariah, Y., Qosim, W.A., dan Ruswandi, D. 2019. Pengaruh Cekaman Kekeringan terhadap Hasil dan Sensitivitas Tiga Genotipe Jawawut. *Jurnal Kultivasi*, 18(3): 933-941.
- Dien, D.C., Mochizuki, T., and Yamakawa, T. 2019. Effect of Various Drought Stresses and Subsequent Recovery on Proline, Total Soluble Sugar and Starch Metabolisms in Rice (*Oryza sativa* L.) Varieties. *Plant Production Science*, 22(4): 530-545.

- Ding, C., Du, S., Ma, Y., Li, X., Zhang, T., and Wang, X. 2019. Changes in the pH of Paddy Soils After Flooding and Drainage: Modeling And Validation. *Geoderma*, 337: 511-513.
- Dogra, S., Chand, G., and Sinha, B.K. 2018. Physiological and Biochemical Traits as Tools to Screen Sensitive and Resistant Genotypes of *Brassica juncea* Exposed to Drought Stress. *Journal of Pharmacognosy and Phytochemistry*, 7(5): 877-884.
- Dong, H., Mengnan, M., Maoxue, Z., Guangquan, J., Chao, L., and Fengwang, M. 2020. Arbuscular Mycorrhizal Fungi Enhanced Drought Resistance in Apple by Regulating Genes in the MAPK Pathway. *Plant Physiology and Biochemistry*, 149: 245-255.
- Dong, J., Jiang, Y., Lyu, M., Cao, C., Li, X., Xiong, X., Lin, W., Yang, Z., Chen, G., Yang, Y., and Xie, J. 2023. Drought Changes the Trade-Off Strategy of Root and Arbuscular Mycorrhizal Fungi Growth in a Subtropical Chinese Fir Plantation. *Forests*, 14(1): 1-15.
- Edwards, C.E., Ewers, B.E., and Weinig, C. 2016. Genotypic Variation in Biomass Allocation in Response to Field Drought Has a Greater Affect on Yield than Gas Exchange or Phenology. *BMC Plant Biology*, 25: 169-174.
- Elemike, E.E., Uzoh, I.M., Onwudiwe, D.C., and Babalola, O.O. 2019. The Role of Nanotechnology in the Fortification of Plant Nutrients and Improvement of Crop Production. *Applied Sciences*, 9: 499.
- El-Esawi, M.A. 2018. *Brassica Germplasm-Characterization, Breeding and Utilization*. London: IntechOpen.
- El-Nashar, Y.I. 2017. Response of Snapdragon (*Antirrhinum majus* L.) to Blended Water Irrigation and Arbuscular Mycorrhizal Fungi Inoculation: Uptake of Minerals and Leaf Water Relations. *Photosynthetica*, 55(2): 201-209.
- Evelin, H., Giri, B., and Kapoor, R. 2012. Contribution of Glomus intraradices Inoculation to Nutrient Acquisition and Mitigation of Ionic Imbalance in NaCl-Stressed *Trigonella foenum-graecum*. *Mycorrhiza*, 22: 203-217.
- Evelin, H., Kapoor, R., and Giri, B. 2009. Arbuscular Mycorrhizal Fungi in Alleviation of Salt Stress: A Review. *Annals of Botany*, 104: 1263-1280.

- Farahani, A., Lebaschi, H., Hussein, M., Hussein, S.A., Reza, V.A., and Jahanfar, D. 2008. Effects of Arbuscular Mycorrhizal Fungi, Different Levels of Phosphorus and Drought Stress on Water Use Efficiency, Relative Water Content and Proline Accumulation Rate of Coriander (*Coriandrum sativum* L.). *Journal of Medicinal Plants Research*, 2(6): 125-131.
- Farhad, M.S., Babak, A.M., Reza, Z.M., Hassan, R.S.M., and Afshin, T. 2011. Response of Proline, Soluble Sugars, Photosynthetic Pigments and Antioxidant Enzymes in Potato (*Solanum tuberosum* L.) to Different Irrigation Regimes in Greenhouse Condition. *Australian Journal of Crop Science*, 5: 55.
- Farooq, M., Hussain, M., Wahid, A., dan Siddique, K.H.M. 2012. Drought Stress in Plants: An Overview. *Plant Responses to Drought Stress*. Springer-Verlag. Berlin. 1-33.
- Farooq, M., Wahid, A., Kobayashi, N., Fujita, D., and Basra, S.M.A. 2009. Plant Drought Stress: Effects, Mechanisms and Management. *Agronomy for Sustainable Development*, 29: 185-212.
- Fathi, A. 2022. Role of Nitrogen (N) in Plant Growth, Photosynthesis Pigments, and N Use Efficiency: A Review. *Agrisost*, 28: 1-8.
- Febrianna, M., Priyono, S., dan Novalia, K. 2018. Pemanfaatan Pupuk Organik Cair untuk Meningkatkan Serapan Nitrogen serta Pertumbuhan dan Produksi Sawi (*Brassica juncea* L.) pada Tanah Berpasir. *Jurnal Tanah dan Sumberdaya Lahan*, 5(2): 1009-1018.
- Ferdianto, R.E., Soelaksini, L.D., dan Herlinawati. 2018. Aplikasi Dosis Mikoriza Vesikular Arbuskular (MVA) dan Waktu Aplikasi terhadap Peningkatan Produksi Tanaman Jagung (*Zea mays* L.). *Jurnal Hexagro*, 2(1): 36-42.
- Filipovic, A. 2020. *Water Plant and Soil Relation Under Stress Situation*. IntechOpen.
- Filippou, P., Bouchagier, P., Skotti, E., and Fotopoulos, V. 2014. Proline and Reactive Oxygen/Nitrogen Species Metabolism is Involved in the Tolerant Response of the Invasive Plant Species *Ailanthus altissima* to Drought and Salinity. *Environmental and Experimental Botany*. 97: 1-10.
- Finlay, R.D. 2008. Ecological Aspects of Mycorrhizal Symbiosis: With Special Emphasis on the Functional Diversity of Interactions Involving the Extraradical Mycelium. *Journal of Experimental Botany*, 59: 1115-1126.

- Fiorilli, V., Wang, J.Y., Bonfante, P., Lanfranco, L., and Al-Babili, S. 2019. Apocarotenoids: Old and New Mediators of the Arbuscular Mycorrhizal Symbiosis. *Frontiers in Plant Science*, 10: 1186.
- Fitri, M.Z. dan Salam, A. 2017. Deteksi Kandungan Air Relatif pada Daun sebagai Acuan Induksi Pembungaan Jeruk Siam Jember. *Jurnal Agritop*, 15(2): 252-265.
- Fusconi, A. 2013. Regulation of Root Morphogenesis in Arbuscular Mycorrhizae: What Role Do Fungal Exudates, Phosphate, Sugars and Hormones Play in Lateral Root Formation?. *Annals of Botany*, 113(1): 19-33.
- Gardner, F.P., Pearce, R.B., and Mitchell, R.L. 1991. *Physiology of Crop Plants*. Jakarta: UI-Press.
- Genre, A., Chabaud, M., Timmers, T., Bonfante, P., and Barker, D.G. 2005. Arbuscular Mycorrhizal Fungi Elicit A Novel Intracellular Apparatus in *Medicago Truncatula* Root Epidermal Cells Before Infection. *Plant Cell*, 17: 3489-3499.
- Geremew, A., Carson, L., Woldesenbet, S., Carpenter, S., Peace, E., and Aruna, W. 2021. Interactive Effects of Organic Fertilizers and Drought Stress on Growth and Nutrient Content of *Brassica juncea* at Vegetative Stage. *Sustainability*, 13: 1-18.
- Ghotbi-Ravandi, A.A., Shahbazi, M., Shariati, M., and Mulo, P. 2014. Effects of Mild and Severe Drought Stress on Photosynthetic Efficiency in Tolerant and Susceptible Barley (*Hordeum vulgare* L.) Genotypes. *Journal of Agronomy and Crop Science*, 200(6): 403-415.
- Gogoi, P. 2011. Differential Effect of Some Arbuscular Mycorrhizal Fungi on Growth of *Piper longum* L. (Piperaceae). *Indian Journal of Science and Technology*, 4(2): 119-125.
- Goltapeh, E.M., Danesh, Y.Z., Prasad, R., and Varma, A. 2008. *Mycorrhizal Fungi: What We Know and What Should We Know?* In: Varma A (Ed). *Mycorrhiza: State of the Art, Genetics and Molecular Biology, Eco-Function, Biotechnology, EcoPhysiology, Structure and Systematics*. India. Springer.
- Guether, M., Neuhäuser, B., Balestrini, R., Dynowski, M., Ludewig, U., and Bonfante, P. 2009. A Mycorrhizal-Specific Ammonium Transporter from

Lotus Japonicus acquires Nitrogen Released by Arbuscular Mycorrhizal Fungi. Plant Physiology, 150: 73-83.

Guo, Y.Y., Yu, H.Y., Kong, D.S., Yan, F., and Zhang, Y.J. 2016. Effects of Drought Stress on Growth and Chlorophyll Fluorescence of *Lycium ruthenicum* Murr. Seedlings. *Photosynthetica*, 54: 524-531.

Gururani, M.A., Venkatesh, J., and Tran, L.S.P. 2015. Regulation of Photosynthesis During Abiotic Stress-Induced Photoinhibition. *Molecular Plant*, 8(9): 1304-1320.

Hadianur, S., Syafruddin., dan Kesumawati, E. 2016. Pengaruh Jenis Fungi Mikoriza Arbuskular terhadap Pertumbuhan dan Hasil Tanaman Tomat (*Lycopersicum esculentum* Mill). *Jurnal Agrista*, 20(3): 126-134.

Halid, E. 2017. Uji Efektivitas Pemberian Fungi Mikoriza Arbuskular terhadap Cekaman Kekeringan Bibit Kakao Klon Lokal. *Agrokompleks*, 16(1): 33-37.

Hamida, R. dan Dewi, K. 2015. Efektivitas Mikoriza Vesikular Arbuskular dan 5-*aminolevulinic Acid* terhadap Pertumbuhan Jagung Varietas Lokal Madura pada Cekaman Kekeringan. *Penelitian Pertanian Tanaman Pangan*, 34(1): 61-67.

Han, Y., Lou, X., Zhang, W., Xu, T., and Tang, M. 2022. Arbuscular Mycorrhizal Fungi Enhanced Drought Resistance of *Populus cathayana* by Regulating the 14-3-3 Family Protein Genes. *Microbiology Spectrum*, 10(3): 1-18.

Harrison, M.J., Dewbre, G.R., and Liu, J. 2002. A Phosphate Transporter From *Medicago Truncatula* Involved in the Acquisition of Phosphate Released by Arbuscular Mycorrhizal Fungi. *Plant Cell*, 14: 2413-2429.

Hartmann, M., Frey, B., Mayer, J., Mader, P., and Widmer, F. 2015. Distinct Soil Microbial Diversity Under Long-Term Organic and Conventional Farming. *ISME Journal*, 9: 1177-1194.

Hasanah, U., Purnomowati., dan Dwiputranto, U. 2017. Pengaruh Inokulasi Mikoriza Vesikula Arbuskula (MVA) Campuran terhadap Kemunculan Penyakit Layu Fusarium pada Tanaman Tomat (*Solanum lycopersicum*). *Scripta Biologica*, 4(1): 31-35.

Hashem, A., Abd-Allah, E.F., Alqarawi, A.A., and Egamberdieva, D. 2016. Bioremediation of Adverse Impact of Cadmium Toxicity on *Cassia italica*

- Mill by Arbuscular Mycorrhizal Fungi. *Saudi Journal of Biological Sciences*, 23: 39-47.
- Hastika, D.W. and Daningsih, E. 2021. Stomatal Number and Size of Dicotyledon Plants. *EPiC Series in Biological Sciences*, 1: 54-60.
- Hazman, M. and Brown, K.M. 2018. Progressive Drought Alters Architectural and Anatomical Traits of Rice Roots. *Rice*, 11(1): 2-16.
- Hazzoumi, Z., Moustakime, Y., Elharchli, E.H., and Joutei, K.A. 2015. Effect of Arbuscular Mycorrhizal Fungi (AMF) and Water Stress on Growth, Phenolic Compounds, Glandular Hairs, and Yield of Essential Oil in Basil (*Ocimum gratissimum* L.). *Chemical and Biological Technologies in Agriculture*, 2: 1-11.
- He, Y., Cornelissen, J.H., Wang, P., Dong, M., and Ou, J. 2019. Nitrogen Transfer from One Plant to Another Depends on Plant Biomass Production between Conspecific and Heterospecific Species Via A Common Arbuscular Mycorrhizal Network. *Environ. Environmental Science and Pollution Research*, 26: 8828-8837.
- Heidarianpour, M.B., Aliasghar zad, N., and Olsson, P.A. 2020. Positive Effects of Co-Inoculation with *Rhizophagus irregularis* and *Serendipita indica* on Tomato Growth Under Saline Conditions, and Their Individual Colonization Estimated by Signature Lipids. *Mycorrhiza*, 30: 455-466.
- Helyes, L., Pék, Z., Daood, H.G., and Posta, K. 2015. Effect of Mycorrhizal on Main Antioxidant Content of Processing Tomato. *Acta Horticulturae*, 1081: 105-110.
- Herawati, N., Syarif, Z., Armansyah., dan Azizah, N. 2020. Respon Tanaman Sereh Wangi (*Andropogon nardus* L.) Akibat Pemberian Mikoriza *Glomus* sp.1 dan Tingkat Pemberian Air yang Berbeda. Seminar Nasional Virtual, Payakumbuh: 24 September. Hal. 89-103.
- Hidangmayum, P., Dwivedi, P., Kumar., and Upadhyay, S.K. 2022. Seed Priming and Foliar Application of *Chitosan ameliorate* Drought Stress Responses in Mungbean Genotypes Through Modulation of Morpho-Physiological Attributes and Increased Antioxidative Defense Mechanism. *Journal of Plant Growth Regulation*, 1-18.

- Hien La, V., Bok, R.L., Islam, M.T., Mamun, M.A., Sanghyun, P., Dongwon, B., and Taehwan, K. 2020. Characterization of Glutamate-Mediated Hormonal Regulatory Pathway of the Drought Responses in Relation to Proline Metabolism in *Brassica napus* L. *Plants*, 9(4): 1-18.
- Hijri, M. 2016. Analysis of a Large Data Set of Mycorrhizal Inoculation Field Trials on Potato Shows Highly Significant Increases in Yield. *Mycorrhiza*, 26: 209-214.
- Hill, J.O., Simpson, R., and Ryan, M. 2010. Root Hair Morphology and Mycorrhizal Colonisation of Pasture Species in Response to Phosphorus and Nitrogen Nutrition. *Crop and Pasture Science*, 61(2).
- Hopkins, W.G. and Huner, N.P.A. 2009. *Introduction to Plant Physiology*. Canada: John Wiley & Sons, Inc.
- Horvath, K.Z., Andryei, B., Helyes, L., PEK, Z., Nemenyi, A., and Nemeskeri, E. 2020. Effect of Mycorrhizal Inoculations on Physiological Traits and Bioactive Compounds of Tomato Under Water Scarcity in Field Conditions. *Notulae Botanicae Horti Agrobotanici Cluj-Napoca*, 48(3): 1233-1247.
- Hossain, M.A., Kumar, V., Burritt, D.J., Fujita, M., and Mäkelä, P. 2019. Osmoprotectant-Mediated Abiotic Stress Tolerance in Plants. In *Proline Metabolism and Its Functions in Development and Stress Tolerance*; Springer Nature: Cham, Switzerland, 41-72.
- Huang, D., Ma, M., Wang, Q., Zhang, M., Jing, G., Li, C., and Ma, F. 2020. Arbuscular Mycorrhizal Fungi Enhanced Drought Resistance in Apple by Regulating Genes in the MAPK Pathway. *Plant Physiology and Biochemistry*, 149: 245-255.
- Husen, A., Iqbal, M., and Aref, I.M. 2014. Growth, Water-Status, and Leaf Characteristics of *Brassica carinata* Under Drought and Rehydration Conditions. *Brazilian Journal of Botany*, 37(2): 1-11.
- Husna., Tuheteru, F.D., Wulandari, J., Arif, A., Basrudin., Albasri., and Nurdin, W.R. 2021. Respons Pertumbuhan Semai Kayu Kuku [*Pericopsis mooniana* (Thw.) Thw.] dengan Inokulasi Fungi Mikoriza Arbuskula (FMA) Lokal dan Urea pada Media Tanah Serpentine. Prosiding Seminar Nasional Mikoriza, Kendari: 10 Agustus. Hal. 129-148.

- Igiehon, O.N. and Babalola, O.O. 2021. Rhizobium and Mycorrhizal Fungal Species Improved Soybean Yield Under Drought Stress Conditions. *Current Microbiology*, 78: 1615-1627.
- Integrated Taxonomy Information System (ITIS). 2000. The PLANTS Database. https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=23059#null. Diakses 20 Juni 2023.
- Ipsilantis, I. and Sylvia, D.M. 2007. Abundance of Fungi and Bacteria in A Nutrient-Impacted Florida Wetland. *Applied Soil Ecology*, 35(2): 272-280.
- Irwan A.W. dan Wicaksono, F.Y. 2017. Perbandingan Pengukuran Luas Daun Kedelai dengan Metode Gravimetri, Regresi, dan Scanner. *Jurnal Kultivasi*, 16(3): 425-429.
- Istarofah dan Salamah, Z. 2017. Pertumbuhan Tanaman Sawi Hijau (*Brassica juncea* L.) dengan Pemberian Kompos Berbahan Dasar Daun Paitan (*Tithonia diversifolia*). *Bio-site*, 3(1): 39-46.
- Jaiphong, T., Jun, T., Kenta, W., Mai, N., Hiroo, T., Ryuichi, S., Masami, U., and Yoshinobu, K. 2016. Effects of Duration and Combination of Drought and Flood Conditions on Leaf Photosynthesis, Growth and Sugar Content in Sugarcane. *Plant Production Science*, 19(3): 427-437.
- Jakobsen, I., Chen, B., Munkvold, L., Lundsgaard, T., and Zhu, Y.G. 2005. Contrasting Phosphate Acquisition of Mycorrhizal Fungi With that of Root Hairs Using the Root Hairless Barley Mutant. *Plant, Cell and Environment*, 28: 928-938.
- Jamilah, M., Purnomowati, dan Dwiputranto, U. 2016. Pertumbuhan Cabai Merah (*Capsicum annum* L.) pada Tanah Masam yang Diinokulasi Mikoriza Vesikula Arbuskula (MVA) Campuran dan Pupuk Fosfat. *Biosfera*, 33(1): 37-45.
- Jannah, H. 2011. Respon Tanaman Kedelai terhadap Asosiasi Fungi Mikoriza Arbuskular di Lahan Kering. *Ganec Swara*, 5(2): 28-31.
- Jat, M.I., Bhakar, S.R., Sharma, S.K., dan Kothari, A.K. 2016. *Dryland Technology*. Second Edition. New Delhi: Scientific Publisher.
- Jiayin, M., Tingting, C., Jie, L., Weimeng, F., Baohua, F., Guangyan, L., Hubo, L., Juncai, L., Zhihai, W., Longxing, T., and Guanfu, F. 2022. Functions of

Nitrogen, Phosphorus and Potassium in Energy Status and Their Influences on Rice Growth and Development. *Rice Science*, 29(2): 166-178.

Juairiah, L. 2014. Studi Karakter Stomata Beberapa Jenis Tanaman Revegetasi di Lahan Pasca Pengembangan Timah di Bangka. *Widyariset*, 17(2): 213-218.

Jumrani, K., Bhatia, V.S., Kataria, S., Alamri, S.A., Siddiqui, M.H., and Rastogi, A. 2022. Inoculation with Arbuscular Mycorrhizal Fungi Alleviates the Adverse Effects of High Temperature in Soybean. *Plants*, 11: 1-12.

Kalina, D.S., Plich, J., Zyta, D.S., Sliwka, J., and Marczewski, W. 2016. The Effect of Drought Stress on the Leaf Relative Water Content and Tuber Yield of a Half-Sib Family of 'Katahdin'-Derived Potato Cultivars. *Breeding Science*, 66(2): 328-331.

Kalve, S., Vos, D.D., and Beemster, G.T.S. 2014. Leaf Development: A Cellular Perspective. *Frontiers in Plant Science*, 5: 362.

Kandowanko, N.Y. 2019. *Solusi Kekeringan Tanaman Jagung*. Gorontalo: Ideas Publishing.

Karmilasanti dan Maharani, R. 2016. Keanekaragaman Jenis Jamur Ektomikoriza pada Ekosistem Hutan Dipterokarpa di KHDTK Labanan, Berau, Kalimantan Timur. *Jurnal Penelitian Ekosistem Dipterokarpa*, 2(2): 57-66.

Kartika, Fadilah, L.N., dan Lakitan, B. 2021. Growth Responses and Yield of Cauliflower (*Brassica oleracea* var. botrytis L.) to the Delayed Transplanting and Drought Stress. *E3S Web of Conferences*, 306: 1-9.

Kaur, S. and Sharma, P. 2015. Physiological Response of Indian Mustard (*Brassica juncea* L.) to Different Moisture Regimes. *The Bioscan*, 10: 1357-1365.

Kheradmand, M.A., Fahraji, S.S., and Fatahi, E. 2014. Effect of Water Stress on Oil Yield and Some Characteristics of *Brassica napus*. *International Research Journal of Applied and Basic Sciences*, 8(9): 1447-1453.

Kholodar, S.A., Allen, C.L., Gulick, A.M., dan Murkin, A.S. 2015. The Role of Phosphate in a Multistep Enzymatic Reaction: Reactions of the Substrate and Intermediate in Pieces. *Journal of the American Chemical Society*, 137(7): 2748-2756.

- Khorobrykh, S., Havurinne, V., Mattila, H., and Tyystjarvi, E. 2020. Oxygen and ROS in Photosynthesis. *Plants*, 9(1): 1-63.
- Kim, C. and Apel, K. 2013. Singlet Oxygen-Mediated Signaling in Plants: Moving From Flu to Wild Type Reveals an Increasing Complexity. *Photosynthesis Research*, 116: 455-464.
- Kim, S.J., Lee, H., and Eom, A.H. 2017. Effects of Arbuscular Mycorrhizal Fungi and Soil Conditions on Crop Plant Growth. *Mycobiology*, 45(1): 20-24.
- Kondamudi, R., Swamy, K.N., Rao, Y.V., Kiran, T.V., Suman, K., Rao, D.S., Rao, P.R., Subrahmanyam, D., Sarla, N., and Kumari, B.R. 2016. Gas Exchange, Carbon Balance and Stomatal Traits in Wild and Cultivated Rice (*Oryza sativa* L.) Genotypes. *Acta Physiol. Plant*, 38: 1-9.
- Kong, J., Pei, Z., Du, M., Sun, G., and Zhang, X. 2014. Effects of Arbuscular Mycorrhizal Fungi on the Drought Resistance of the Mining Area Repair Plant Sainfoin. *International Journal of Mining Science and Technology*, 24: 485-489.
- Kozlowski, T.T. and Pallardy, S.G. 2002. Acclimation and Adaptive Responses of Woody Plants to Environmental Stresses. *The Botanical Review*, 68(2): 270-334.
- Kumalawati, Z., Kafrawi., dan Elfasila, I. 2015. Kelimpahan Spora Dua Jenis Cendawan Mikoriza Arbuskula pada Rizosfer Bibit Lada (*Piper nigrum* L.) Setelah Aplikasi Pupuk Majemuk. *Jurnal Agrolantae*, 4(1): 35-40.
- Ladaniya, M. 2022. *Citrus Fruit: Biology, Technology, and Evaluation*. London: Academic Press.
- Lahlou, O., Ouattar, S., dan Ledent, J.F. 2003. Pengaruh Kekeringan dan Varietas terhadap Parameter Pertumbuhan, Hasil dan Komponen Hasil Kentang. *Agronomi*, 23: 257-268.
- Lakitan, B. 2013. *Dasar-Dasar Fisiologi Tumbuhan*. Jakarta: Rajawali Press.
- Lamaoui, M., Jemo, M., Datia, R., dan Bekkaoui, F. 2018. Heat and Drought Stresses in Crops and Approaches for Their Mitigation. *Frontiers in Plant Science*, 25: 6: 1-14.

- Lambers, H. 2021. Phosphorus Acquisition and Utilization in Plants. *Annual Review of Plant Biology*, 73: 17-42.
- Lambers, H., Chapin, F.S., and Pons, T.L. 2008. *Plant Physiological Ecology*. Australia: Springer Science and Business Media.
- Lanfranco, L., Fiorilli, V., and Gutjahr, C. 2018. Partner Communication and Role of Nutrients in the Arbuscular Mycorrhizal Symbiosis. *New Phytologist*, 220(4): 1031-1046.
- Latif, F., Ullah, F., and Mehmood, S. 2016. Effects of Salicylic Acid on Growth and Accumulation of Phenolics in *Zea Mays* L. Under Drought Stress. *Acta Agriculturae Scandinavica*, 66(4): 325-332.
- Latz, M.A., Jensen, B., Collinge, D.B., and Jørgensen, H.J. 2018 Endophytic Fungi as Biocontrol Agents: Elucidating Mechanisms in Disease Suppression. *Plant Ecology & Diversity*, 11: 555-567.
- Lauteri, M., Haworth, M., Serraj, R., Monteverdi, M.C., and Centritto, M. 2014. Photosynthetic Diffusional Constraints Affect Yield in Drought Stressed Rice Cultivars During Flowering. *PLOS ONE*, 9(10): 1-12.
- Li, J., Meng, B., Chai, H., Yang, X., Song, W., Shuixiu, L., Ao, L., Tao, Z., and Sun, W. 2019. Arbuscular Mycorrhizal Fungi Alleviate Drought Stress in C3 (*Leymus chinensis*) and C4 (*Hemarthria altissima*) Grasses via Altering Antioxidant Enzyme Activities and Photosynthesis. *Frontiers in Plant Science*, 25: 10: 1-12.
- Li, M. and Kim, C. 2022. Chloroplast ROS and Stress Signaling. *Plant Communication*, 3(1): 1-15.
- Li, Y.W., Tong, C.L., and Sun, M.F. 2022. Effect and Molecular Mechanism of Mycorrhiza on the Growth, Nutrient Absorption, Quality of Fresh Leaves, and Antioxidant System of Tea Seedlings Suffering from Salt Stress. *Agronomy*, 12(9): 2163.
- Lichtenthaler, H.K. and Buschmann, C. 2001. Chlorophylls and carotenoids: measurement and characterization by UV-VIS spectroscopy. *Current Protocols in Food Analytical Chemistry*, 1(1): 31-38.
- Liu, J.J., Chen, J., Xie, K., Tian, Y., Yan, A., Liu, J., Huang, Y., Wang, S., Zhu, Y., and Chen, A. 2020. A Mycorrhiza-Specific H⁺-ATPase is Essential for

Arbuscule Development and Symbiotic Phosphate and Nitrogen Uptake. *Plant, Cell & Environment*, 43: 1069-1083.

Liu, J.J., Wei, Z., and Li, J.H. 2014. Effects of Copper on Leaf Membrane Structure and Root Vigor of Maize Seedling. *Botanical Studies*, 55: 1-6.

Liu, T. and Tang, M. 2014. Effects of Arbuscular Mycorrhizal Fungi on Growth and Anatomical Properties of Stomata and Xylem in Poplars. *Chinese Journal of Plant Ecology*, 38(9): 1001-1007.

Liu, T., Sheng, M., Wang, C.Y., Chen, H., Li, Z., and Tang, M. 2015. Impact of Arbuscular Mycorrhizal Fungi on the Growth, Water Status, and Photosynthesis of Hybrid Poplar Under Drought Stress and Recovery. *Photosynthetica*, 53(2): 250-258.

Liu, Z., Cheng, R., Xiao, W., Guo, Q., and Wang, N. 2014. Effect of Off-Season Flooding on Growth, Photosynthesis, Carbohydrate Partitioning, and Nutrient Uptake in *Distylium chinense*. *PLoS ONE*, 9(9): 1-9.

Lynch, J.P. 2015. Root Phenotypes that Reduce the Metabolic Costs of Soil Exploration: Opportunities for 21st Century Agriculture. *Plant, Cell and Environment*, 38: 1775-1784.

Madouh, T.A. and Quoreshi, A.M. 2023. The Function of Arbuscular Mycorrhizal Fungi Associated with Drought Stress Resistance in Native Plants of Arid Desert Ecosystems: A Review. *Diversity*, 15: 1-17.

Mahanani, A.U., Tuhuteru, S., Haryanto, T.A.D., dan Rif'an, M. 2020. Karakteristik Stomata Daun Tanaman Padi Gogo (*Oryza sativa* L.) Berdasarkan Ketinggian Tempat Tumbuh di Kabupaten Jayawijaya. *Gontor Agrotech Science Journal*, 6(3): 251-281.

Manurung, Y.C., Hanafiah, A.S., dan Marbun, P. 2015. Pengaruh Berbagai Kadar Air Tanah pada Efektivitas Mikoriza Arbuskular terhadap Pertumbuhan dan Serapan Hara Bibit Karet (*Hevea brasiliensis* Muell. Arg.) di Rumah Kasa. *Jurnal Online Agroekoteknologi*, 3(2): 465-475.

Maoka, T. 2020. Carotenoids as Natural Functional Pigments. *Journal of Natural Medicines*, 74: 1-16.

- Marantika, M., Hiariej, A., dan Sahertian, E. 2021. Pengujian Kerapatan dan Distribusi Stomata Daun Spesies Mangrove di Desa Negeri Lama Kota Ambon. *Jurnal Ilmu Alam dan Lingkungan*, 12(1): 1-6.
- Marschner, H. 1995. *Mineral Nutrition of Higher Plants*. New York: Academic Press.
- Marwani, E., Suryatmana, P., Kerana, I.W., Puspanikan, D.L., Setiawadi, M.R., dan Manurung, R. 2013. Peran Mikoriza Vesikular Arbuskular dalam Penyerapan Nutrien, Pertumbuhan, dan Kadar Minyak Jarak (*Jatropha curcas* L.). *Bionatura*, 15(1): 1-7.
- Maryono, E., Syafruddin, D., Supiandi, M.I., Bustami, Y., dan Lisa, Y. 2019. Pertumbuhan Tinggi Tanaman Sawi Hijau Melalui Pemberian Campuran Media Tanam Berbahan Apu-Apu. *Jurnal Biologi dan Pembelajarannya*, 6(1): 7-12.
- Mathobo, R., Marais, D., and Steyn, J.M. 2017. The Effect of Drought Stress on Yield, Leaf Gaseous Exchange and Chlorophyll Fluorescence of Dry Beans (*Phaseolus vulgaris* L.). *Agricultural Water Management*, 180: 118-125.
- Matondang, A.M., Syafruddin., dan Jumini. 2020. Pengaruh Jenis dan Dosis Pupuk Hayati Mikoriza terhadap Pertumbuhan dan Hasil Tanaman Cabai (*Capsicum annum* L.) pada Tanah Andisol Lembah Seulawah Aceh Besar. *Jurnal Ilmiah Mahasiswa Pertanian*, 5(2): 101-110.
- Maylani, E.D., Yuniati, R., and Wardhana, W. 2020. The Effect of Leaf Surface Character on the Ability of Water Hyacinth, *Eichornia crassipes* (Mart.) Solms. to Transpire Water. IOP Conference Series: Materials Science and Engineering, 902: 1-7.
- Mbeong., Y.S.N., Umami, N., Hanim, C., Astuti, A., Muhlisin., Rizky, E., and Rahayu, V. 2022. The Effect of Mycorrhizal Provision and Watering Frequency on the Nutrient and Prussic Acid Content of Sorghum (*Sorghum bicolor* (L.) Moench). *Advances in Biological Sciences Research*, 20: 230-236.
- Meddich, A., Jaiti, F., Bourzik, W., El-Asli, A., and Hafidi, M. 2015. Use of Mycorrhizal Fungi as a Strategy for Improving the Drought Tolerance in Date Palm (*Phoenix dactylifera*). *Scientia Horticulturae*, 192: 468-474.

- Mibei, E.K., Ambuko, J., Giovannoni, J.J., Onyango, A.N., and Owino, W.O. 2017. Carotenoid Profiling of the Leaves of Selected African Eggplant Accessions Subjected to Drought Stress. *Food Science and Nutrition*, 5(1): 113-122.
- Mo, Y., Wang, Y., Yang, R., Zheng, J., Liu, C., and Li, H. 2016. Regulation of Plant Growth, Photosynthesis, Antioxidation and Osmosis by an Arbuscular Mycorrhizal Fungus in Watermelon Seedlings Under Well-Watered and Drought Conditions. *Frontiers in Plant Science*, 7: 644.
- Moctava, M.A., Koesriharti., dan Dawam, M. 2013. Respon Tiga Varietas Sawi (*Brassica rapa* L.) terhadap Cekaman Air. *Jurnal Produksi Tanaman*, 1(2): 90-98.
- Mollavali, M., Bolandnazar, S., Nazemieh, H., Zare, F., and Aliasgharzad, 2015. The Effect of Mycorrhizal Fungi on Antioxidant Activity of Various Cultivars of Onion (*Allium cepa* L). *International Journal of Biosciences*, 6(1): 66-79.
- Moller, C.L., Kjollerr, R., and Sand-Jensen, K. 2013. Organic Enrichment of Sediments Reduces Arbuscular Mycorrhizal Fungi in Oligotrophic Lake Plants. *Freshwater Biology*, 58(4).
- Mommer, L., Lenssen, J.P.M, Huber, H., Visser, E.J.W, and De, K.H. 2006. Ecophysiological Determinants of Plant Performance Under Flooding: A Comparative Study of Seven Plant Families. *Journal of Ecology*, 94: 1117-1129.
- Moradtalab, N., Roghieh, H., Nasser, A., Tobias, E.H., and Günter, N. 2019. Silicon and the Association With An Arbuscular-Mycorrhizal Fungus (*Rhizophagus clarus*) Mitigate the Adverse Effects of Drought Stress on Strawberry. *Agronomy*, 9: 41.
- Morales-Olmedo, M., Ortiz, M., and Sellés, G. 2015. Effects of Transient Soil Waterlogging and its Importance for Rootstock Selection. *Chilean Journal of Agricultural Research*, 75: 45-56.
- Moriondo, M., Giannakopoulos, C., and Bindi, M. 2011. Climate Change Impact Assessment: The Role of Climate Extremes in Crop Yield Simulation. *Climatic Change*, 104(3): 679-701.
- Mudhita, I.K., Umami, N., Sasmito., Budhi, S.P., Baliarti, E., Noviandi, C.T., Kustono., Budisatria, I.G.S., dan Wattimena, J. 2016. Effect of Bali Cattle

- Urine on Legume Cover Crop Puero (*Pueraria javanica*) Productivity on an East Borneo Oil Palm Plantation. *Pakistan Journal of Nutrition*, 15: 406-411.
- Muis, A., Indradewa, D., dan Widada, J. 2013. Pengaruh Inokulasi Mikoriza Arbuskula terhadap Pertumbuhan dan Hasil Kedelai (*Glycine max* (L.) Merrill) pada Berbagai Interval Penyiraman. *Vegetalika*, 2(2): 7-20.
- Munthe, K., Pane, E., dan Panggabean, E.L. 2018. Budidaya Tanaman Sawi (*Brassica juncea* L.) pada Media Tanam yang Berbeda secara Vertikultur. *Jurnal Agrotekma*, 2(2): 138-151.
- Musfal. 2010. Potensi Cendawan Mikoriza Arbuskula untuk Meningkatkan Hasil Tanaman Jagung. *Jurnal Penelitian dan Pengembangan Pertanian*, 29(4): 154-158.
- Muszyńska, E. and Labudda, M. 2019. Dual Role of Metallic Trace Elements in Stress Biology from Negative to Beneficial Impact on Plants. *International Journal of Molecular Sciences*, 20: 3117.
- Nabilla, I.O. dan Nurcahyani, E. 2022. Analisis Kandungan Klorofil pada Famili Orchidaceae terhadap Cekaman Kekeringan. *CASSOWARY*, 5(2): 134-139.
- Nafees, M., Ullah, S., and Bumi, T. 2019. Vesicular Arbuscular Mycorrhizal (VAM) Studies in Six Pteridophytes in District Buner. *International Journal of Botany Studies*, 4(5): 98-101.
- Nagahashi, G. and Douds, D. 2007. Separated Components of Root Exudate and Cytosol Stimulate Different Morphologically Identifiable Types of Branching Responses by Arbuscular Mycorrhizal Fungi. *Mycological Research*, 111(4): 487-92.
- Nakmee, P.S., Techapinyawat, S., and Ngamprasit, S. 2016. Comparative Potentials of Native Arbuscular Mycorrhizal Fungi to Improve Nutrient Uptake and Biomass of *Sorghum bicolor* Linn. *Agriculture and Natural Resources*, 50: 173-178.
- Nasaruddin and Ridwan, I. 2018. Photosynthetic Apparatus of Soybean Exposed to Drought Due to Application of Arbuscular Mycorrhizal. *Asian Journal of Plant Sciences*, 17(1): 37-46.
- Nasaruddin. 2012. Respon Pertumbuhan Bibit Kakao Terhadap Inokulasi Azotobacter dan Mikoriza. *Jurnal Agrivigor*, 11(2): 300-315.

- Nawaz, F., Shehzad, M.A., and Majeed, S. 2020. Role of Mineral Nutrition in Improving Drought and Salinity Tolerance in Field Crops. *Springer*, 129-147.
- Nazeri, N.K., Lambers, H., Tibbett, M., and Ryan, M.H. 2014. Moderating Mycorrhizal: Arbuscular Mycorrhizal Modify Rhizosphere Chemistry and Maintain Plant Phosphorus Status Within Narrow Boundaries. *Plant, Cell, and Environment*, 37(4): 911-921.
- Nell, M., Wawrosch, C., Steinkellner, S., Vierheilig, H., Kopp, B., and Lössl, A. 2010. Root Colonization by Symbiotic Arbuscular Mycorrhizal Fungi Increases Sesquiterpenic Acid Concentrations in *Valeriana officinalis* L. *Planta Medica*, 76: 393-398.
- Nemeskéri, E., Molnár, K., Pék, Z., and Helyes, L. 2018. Effect of Water Supply on the Water Use-Related Physiological Traits and Yield of Snap Beans in Dry Seasons. *Irrigation Science*, 36: 143-158.
- Nezhadahmadi, A., Faruq, G., and Rashid, K. 2015. Influence of Drought Stress on Leaf Traits of Different Strawberry (*Fragaria ananassa* L.) Varieties in Natural Environment. *Communication in Soil Science and Plant Analysis*, 46(10): 1249-1262.
- Nidia, P. 2018. Respon Pertumbuhan Beberapa Genotipe Padi Sawah Lokal Asal Kecamatan Tambang, Kabupaten Kampar pada Berbagai Tingkat Kadar Lengas Tanah. Skripsi. *Tidak Dipublikasikan*. Universitas Islam Negeri Sultan Syarif Kasim Riau.
- Nio, S.A., Pirade, M., dan Ludong, D.P.M. 2019. Leaf Chlorophyll Content in North Sulawesi (Indonesia) Local Rice Cultivars Subjected to Polyethylene Glycol (PEG) 8000-Induced Water Deficit at the Vegetative Phase. *Biodiversitas*, 20: 2462-2467.
- Novenda, I.L., dan Nugroho, S.A. 2016. Analisis Kandungan Prolin Tanaman Kangkung (*Ipomoea reptans* Poir), Bayam (*Amaranthus spinosus*), dan Ketimun (*Cucumis sativus* L.). *Pancaran*, 5(4): 223-234.
- Nurhalimah, S., Nurhatika, S., dan Anton, M. 2014. Eksplorasi Mikoriza Vesikular Arbuskular (MVA) Indigenous pada Tanah Regosol di Pamekasan, Madura. *Jurnal Sains dan Seni POMITS*, 3(1): 2337-3520.

- Nurhandayani, R., Linda, R., dan Khotimah, S. 2013. Inventarisasi Jamur Mikoriza Vesikular Arbuskular dari Rhizosfer Tanah Gambut Tanaman Nanas (*Ananas comosus* L. *Jurnal Protobiont*, 2(3): 146-151.
- Nurhayati., Siregar, C., Akbar, A., and Sinaga, D. 2022. Determine the Effects of Drought Stress on the Cacao Seedlings (*Theobroma cacao* L.) with Rice Straw Compost. *Asian Journal of Plant Sciences*, 21(2): 215-220.
- Nurjanaty, N., Linda, R., dan Mukarlina. 2019. Pengaruh Cekaman Air dan Pemberian Pupuk Daun terhadap Pertumbuhan Tanaman Sawi (*Brassica juncea* L.). *Jurnal Protobiont*, 8(3): 6-11.
- Nursafrina, N. 2021. Respon Fisiologi Sawi Caisim (*Brassica juncea* L.) Akibat Penurunan Ketersediaan Air Tanah. Skripsi. *Tidak Dipublikasikan*. Universitas Sumatera Utara.
- Oliveira, T.C., Cabral, J.S.R., Santana, L.R., Tavares, G.G., Santos, L.D.S., Paim, T.P., Muller, C., Silva, F.G., Costa, A.C., Souchie, E.L., and Mendes, G.C. 2022. The Arbuscular Mycorrhizal Fungus *Rhizophagus clarus* Improves Physiological Tolerance to Drought Stress in Soybean Plants. *Scientific Reports*, 12: 1-15.
- Oreen, N., Nazarian, G., Gharibkhani, M. 2013. The Responses of Stomatal Parameters and SPAD Value in Asian Tobacco Exposed to Chromium. *Polish Journal of Environmental Studies*, 22(5): 1441-1447.
- Orsak, M., Katikova, Z., Hnilicka, F., and Lachman, J. 2023. Effect of Long-Term Drought and Waterlogging Stress on Photosynthetic Pigments in Potato. *Plant, Soil and Environment*, 69(4): 152-160.
- Panunggul, V.B. 2021. Pengaruh Pupuk Kandang dan Pupuk Hayati Provimio terhadap Pertumbuhan dan Hasil Tanaman Caisim (*Brassica juncea* L.). *Jurnal Agroqua*, 19(2): 375-382.
- Parihar, P. and Bora, M. 2018. Effect of Mycorrhiza (*Glomus mosseae*) on Morphological and Biochemical Properties of Ashwagandha (*Withania somnifera*) (L.) Dunal. *Journal of Applied and Natural Science*, 10(4): 1115-1123.
- Parwata, I.G.M.A., Indradewa, D., Yudono, P., Kertonegoro, B.D., dan Kusmarwiyah, R. 2014. Respon Pertumbuhan dan Hasil Tanaman Jarak Pagar (*Jatropha curcas* L.) terhadap Cekaman Kekeringan di Lahan Pasir Pantai

- pada Tahun Pertama Siklus Produksi. *Jurnal Agronomi Indonesia*, 42(1): 59-65.
- Paszkowski, U. 2006. A Journey Through Signaling in Arbuscular Mycorrhizal Symbioses. Tansley Review. *New Phytologist*, 172: 35-46.
- Pepe, A., Giovannetti, M., and Sbrana, C. 2018. Lifespan and Functionality of Mycorrhizal Fungal Mycelium are Uncoupled from Host Plant Lifespan. *Scientific Reports*, 8: 10235.
- Phillips, J.M. and Hayman, D.S. 1970. Improved Procedures for Clearing Roots and Staining Parasitic Vesicular-Arbuscular Mycorrhizal Fungi for Rapid Assessment of Infection. *Transactions of the British Mycological Society*, 55: 158-161.
- Pirasteh-Anosheh, H., Saed-Moucheshi, A., Pakniyat, H., and Pessarakli, M. 2016. Stomatal Responses to Drought Stress. 11: 24-40.
- Plénet, D., Mollier, A., and Pellerin, S. 2000. Growth Analysis of Maize Field Crops Under Phosphorus Deficiency. II. Radiation-Use Efficiency, Biomass Accumulation and Yield Components. *Plant Soil*, 224: 259-272.
- Pons, C. and Muller, C. 2022. Impacts of Drought Stress and Mycorrhizal Inoculation on the Performance of Two Spring Wheat Cultivars. *Plants*, 11: 1-18.
- Pozo, M.J., López-Ráez, J.A., Azcón-Aguilar, C., and García-Garrido, J.M. 2015. Phytohormones as Integrators of Environmental Signals in the Regulation of Mycorrhizal Symbioses. *New Phytologist*, 205: 1431-1436.
- Prasad, R., Bhola, D., Akdi, K., Cruz, C., Sairam, K.V.S.S., and Tuteja, N. 2017. Introduction to Mycorrhizal: Historical Development. 1-7.
- Prayudyaningsih, R. 2014. Pertumbuhan Semai *Alstonia scholaris*, *Acacia auriculiformis* dan *Muntingia calabura* yang Diinokulasi Fungi Mikoriza Arbuskula pada Media Tanah Bekas Tambang Kapur. *Jurnal Penelitian Kehutanan Wallacea*, 3(1): 13-23.
- Prihastanti, E. 2016. Respon Morfofisiologi Tanaman Kakao (*Theobroma cacao* L.) Terhadap Cekaman Kekeringan di Kawasan Agroforestri Sekitar Taman Nasional Lore Lindu Sulawesi Tengah Indonesia. Disertasi. *Tidak Dipublikasikan*. Institut Pertanian Bogor.

- Pumplin, N., Mondo, S.J., Topp, S., Starker, C.G., Gantt, J.S., and Harrison, M.J. 2010. Medicago truncatula Vapyrin is a Novel Protein Required for Arbuscular Mycorrhizal Symbiosis. *The Plant Journal*, 61: 482–494.
- Purbajanti, E.D., Muzakki, A., and Budiyanto, S. 2021. Application of Cow Manure and Plant Growth Promoting Rhizobacteria on Growth and Production of Mustard (*Brassica juncea* L.). *Journal of Applied Sciences*, 22(3): 122-126.
- Putri, T.E., Yuliani., dan Trimulyono, G. 2019. Penggunaan Mikoriza Vesikular Arbuskular (MVA) Genus *Glomus* untuk Meningkatkan Pertumbuhan dan Produksi Kacang Hijau (*Vigna radiata*) pada Cekaman Air. *LenteraBio*, 8(2): 107-112.
- QiuHong, Y., Hua, W., and Hua, L. 2022. Arbuscular Mycorrhizal Fungi Improve Growth, Photosynthetic Activity, and Chlorophyll Fluorescence of *Vitis vinifera* L. cv. Ecolly Under Drought Stress. *Agronomy*, 12(7): 1-14.
- Quiroga, G., Erice, G., Aroca, R., Chaumont, F., and Ruiz-Lozano, J.M. 2017. Enhanced Drought Stress Tolerance by the Arbuscular Mycorrhizal Symbiosis in a Drought-Sensitive Maize Cultivar is Related to a Broader and Differential Regulation of Host Plant Aquaporins than in a Drought-Tolerant Cultivar. *Frontiers in Plant Science*, 8: 1056.
- Quiroga, G., Erice, G., Aroca, R., Chaumont, F., and Ruiz-Lozano, J.M. 2019. Contribution of the Arbuscular Mycorrhizal Symbiosis to the Regulation of Radial Root Water Transport in Maize Plants Under Water Deficit. *Environmental and Experimental Botany*, 167: 103821.
- Rahdari, P. and Hoseini, S.M. 2012. Drought Stress: A Review. *International Journal of Agronomy and Plant Production*, 3: 443-446.
- Rambabu, B., Padma, V., Thatikunta, R., and Sunil, N. 2016. Effect of Drought Stress on Chlorophyll Content and Antioxidant Enzymes of Green Gram Genotypes (*Vigna radiata* L.). *Nature Environment and Pollution Technology*, 15(4): 1205-1208.
- Ranganayakulu, G., Sudhakar, C., and Reddy, P. 2015. Effect of Water Stress on Proline Metabolism and Leaf Relative Water Content in Two High Yielding Genotypes of Groundnut (*Arachis hypogaea* L.) with Contrasting Drought Tolerance. *Journal of Experimental Biology*, 3: 97-103.

- Rapparini, F. and Peñuelas, J. 2014. Mycorrhizal Fungi to Alleviate Drought Stress on Plant Growth. *Jurnal Use of Microbes for the Alleviation of Soil Stresses*, 1: 21-42.
- Rasouli-Sadaghiani, M., Hassani, A., Barin, M., Danesh, Y.R., and Sefidkon, F. 2010. Effects of AM Fungi on Growth, Essential Oil Production and Nutrients Uptake in Basil. *Journal of Medicinal Plants Research*, 4(21): 2222-2228.
- Ray, A.M. and Inouye, R.S. 2006. Effect of Water-Level Fluctuations on the Arbuscular Mycorrhizal Colonization of *Typha latifolia* L. *Aquatic Botany*, 84: 210-216.
- Ren, B.Z., Zhang, J.W., Li, X., Fan, X., Dong, S.T., Liu, P., and Zhao, B. 2014. Effects of Waterlogging on the Yield and Growth of Summer Maize Under Field Conditions. *Canadian Journal of Plant Science*, 94: 23-31.
- Rezazadeh, S., Ilkaee, M., Aghayari, F., Paknejad, F., and Rezaee, M. 2021. Growth, Yield, Nutrients Uptake and Anatomical Properties of Direct Seeding and Transplanting Maize (*Zea mays* L.) Plants Under Arbuscular Mycorrhizal Fungi and Water Stress. *Journal of Biological Research*, 94: 11-17.
- Rini, D.S., Budiarjo., dan Gunawan, I. 2020. The Mechanism of Plant Response to Drought Stress. *Journal of Ilmu-ilmu Hayati LIPI*, 19(3B): 373-384.
- Riyadi, A.D.R. dan Siswanti, D.U. 2022. Effect of Alkaline and Drought Stress on Growth and SOD Content in Basil Plant (*Ocimum americanum*). *Jurnal Biodjati*, 7(1): 119-131.
- Rotwell, F.M. 1984. Aggregation of Surface Mine Soil by Interaction Between VAM Fungi and Lignin Degradation Product of Lespedeza. *Journal Plant and Soil*, 80-99.
- Ruiz-Lozano, J.M., Aroca, R., Zamarreño, Á.M., Molina, S., Andreo-Jiménez, B., and Porcel, R. 2015. Arbuscular Mycorrhizal Symbiosis Induces Strigolactone Biosynthesis Under Drought and Improves Drought Tolerance in Lettuce and Tomato. *Plant Cell Environment*, 39(2): 441-452.
- Rusmana., Ningsih, E.P., dan Hikmah, A.N. 2022. Effect of Drought Stress and Mycorrhizal Dose on Growth and Yield of Maize (*Zea mays* L.). IOP Conference Series: Earth and Environmental Science, 951: 1-8.

- Ryan, M.H., Tibbett, M., and Edmonds-Tibbett, T. 2012. Carbon Trading for Phosphorus Gain: The Balance Between Rhizosphere Carboxylates and Arbuscular Mycorrhizal Symbiosis in Plant Phosphorus Acquisition. *Plant, Cell and Environment*, 35: 2170-2180.
- Sablowski, R. and Domelas, M.C. 2014. Interplay between Cell Growth and Cell Cycle in Plants. *Journal of Experimental Botany*, 65(10): 2703-14.
- Saboor, A., Ali, M.A., Danish, S., Ahmed, N., Fahad, S., Datta, R., Ansari, M.J., Nasif, O., Rahman, M.H., and Glick, B.R. 2021. Effect of Arbuscular Mycorrhizal Fungi on the Physiological Functioning of Maize Under Zinc-Deficient Soils. *Scientific Reports*, 11: 1-11.
- Saha, S., Begum, H.H., and Nasrin, S. 2019. Effects of Drought Stress on Growth and Accumulation of Proline in Five Rice Varieties (*Oryza sativa* L.). *Journal of the Asiatic Society of Bangladesh, Science*, 45(2): 241-247.
- Saha, S., Begum, H.H., Nasrin, S., and Samad, R. 2020. Effects of Drought Stress on Pigment and Protein Contents and Antioxidant Enzyme Activities in Five Varieties of Rice (*Oryza sativa* L.). *Bangladesh Journal of Biology*, 49(4): 997-1002.
- Saidah, L., Nurhati, S., dan Muhibuddin, A. 2018. Peran VAM (Vesicular Arbuscular Mycorrhizal) terhadap Aktivitas Fotosintetik dan Produksi Osmoprotektan pada Tanaman Kedelai (*Glycine max* L.) di Tanah Kering. *Jurnal Sains dan Seni ITS*, 7(2): 2337-3520.
- Salisbury, F. and Ross, C.W. 1992. *Fisiologi Tumbuhan Jilid 3*. Bandung: ITB Press.
- Sallata, M.K. 2013. Pinus (*Pinus merkusii* Jungh et de Vriese) dan Keberadaannya di Kabupaten Tana Toraja, Sulawesi Selatan. *Buletin Eboni*, 10(2): 85-98.
- Salmeron-Santiago, I.A., Martinez-Trujillo, M., Valdez-Alarcón, J.J., Pedraza-Santos, M.E., Santoyo, G., Pozo, M.J., and Chávez-Bárcenas, A.T. 2022. An Updated Review on the Modulation of Carbon Partitioning and Allocation in Arbuscular Mycorrhizal Plants. *Microorganism*, 10(1): 1-20.
- Sari, S. dan Zahrosa, D.B. 2020. *Lahan Marginal: Menyimpan Ragam Potensi*. Jember: Polije Press.
- Sasidharan, R. and Voeselek, L.A.C.J. 2015. Ethylene-Mediated Acclimations to Flooding Stress. *Plant Physiology*, 169: 3-12.

- Sasmita, M.W.S., Nurhatika, S., dan Muhibuddin, A. 2019. Pengaruh Dosis Mikoriza Arbuskular pada Media AMB-P0K terhadap Pertumbuhan Tanaman Tembakau (*Nicotiana tabacum* var. Somporis). *Jurnal Sains dan Seni ITS*, 8(2): 43-48.
- Sastrahidayat, I.R. 2011. *Rekayasa Pupuk Hayati Mikoriza dalam Meningkatkan Produksi Pertanian*. Malang: Universitas Brawijaya Press.
- Shaneka, S., Lawson, P., Pijut, M., and Michler, C.H. 2014. Comparison of Arabidopsis Stomatal Density Mutants Indicates Variation in Water Stress Responses and Potential Epistatic Effects. *Journal Plant Biology*, 57: 162-173.
- Shao, H.B., Chu, L.Y., Jaleel, C.A., and Zhao, C.X. 2008. Water-Deficit Stress-Induced Anatomical Changes in Higher Plants. 331: 215-225.
- Sharma, S.B., Sayyed, R.Z., Trivedi, M.H., and Gobi, T. 2013. A Phosphate Solubilizing Microbes: Sustainable Approach for Managing Phosphorus Deficiency in Agricultural Soils. *SpringerPlus*, 2: 587.
- Shekari, F., Soltaniband, V., Javanmard, A., and Abbasi, A. 2015. The Impact of Drought Stress at Different Stages of Development on Water Relations, Stomatal Density and Quality Changes of Rapeseed (*Brassica napus* L.). *Iran Agricultural Research*, 34(2): 81-90.
- Silitonga, Y.W. dan Nasution, M.N.H. 2020. Efektivitas Cendawan Mikoriza Arbuskula terhadap Pertumbuhan dan Produksi Jagung Putih (*Zea Mays* L.). *Jurnal Ilmu Pertanian*, 23(1):56-57.
- Sinay, H. 2015. Pengaruh Perlakuan Cekaman Kekeringan terhadap Pertumbuhan dan Kandungan Prolin pada Fase Vegetatif Beberapa Kultivar Jagung Lokal dari Pulau Kisar Maluku di Rumah Kaca. Seminar Nasional Pendidikan Biologi, Malang: 21 Maret. Hal. 228-237.
- Singh, A. and Prasad, S.M. 2014. Effect of Agro-Industrial Waste Amendment on Cd Uptake in *Amaranthus caudatus* Grown Under Contaminated Soil: An Oxidative Biomarker Responses. *Ecotoxicology and Environmental Safety*, 100: 105-113.
- Singh, M., Kumar, J., Singh, S., Singh, V.P., and Prasad, S.M. 2015. Roles of Osmoprotectants in Improving Salinity and Drought Tolerance in Plants: A Review. *Reviews in Environmental Science and Bio/Technology*, 14: 407-426.

- Sishadi, E. 2019. Estimasi Biomassa Tanaman Edamame (*Glycine max* L.) Menggunakan *Ground-Based Remote Sensing*. Skripsi. Tidak Dipublikasikan. Universitas Jember.
- Slayter, R.O. and Barrs, H.D. 1965. Modifications to the Relative Turgidity Technique with Notes on its Significance as an Index of the Internal Water Status of Leaves. *Proceedings of the Montpellier Symposium. Eco-physiology*. 25: 331-342.
- Smith, S.E. and Read, D. 2008. *Mycorrhizal Symbiosis*. Third Edition. New York: Academic Press. Elsevier.
- Sochacki, P., Ward J.R., and Cruzan M.B. 2013. Consequences of Mycorrhizal Colonization for Piriqueta Morphotypes Under Drought Stress. *International Journal of Plant Sciences*, 174: 65-73.
- Song, H. 2005. Effects of VAM on Host Plant in the Condition of Drought Stress and Its Mechanisms. *Electronic Journal of Biology*, 1(3): 44-48.
- Sowmen, S., Abdullah, P.D.M.H., dan Soepandi, D. 2014. Adaptasi Legum Pohon yang Diinokulasi dengan Fungi Mikoriza Arbuskular (FMA) Saat Cekaman Kekeringan. *Jurnal Peternakan Indonesia*, 16(1): 46-54.
- Steffens, B. and Rasmussen, A. 2016. The Physiology of Adventitious Roots. *Jurnal MEDIAGRO*, 120(2): 603-617.
- Steinthorsdottir, M., Vajda., and Pole, M. 2019. Significant Transient pCO₂ Perturbation at the New Zealand Oligocene-Miocene transition Recorded by Fossil Plant Stomata. *Palaeogeogr Palaeoclimatol Palaeoecol*, 515: 152-161.
- Subantoro, R. 2014. Pengaruh Cekaman Kekeringan terhadap Respon Fisiologis Perkecambahan Benih Kacang Tanah (*Arachis hypogaea* L.). *Jurnal MEDIAGRO*, 10(2): 32-44.
- Subramanian, K.S., Bharathi, C., and Jegan, A. 2008. Response of Maize to Mycorrhizal Colonization at Varying Levels of Zinc And Phosphorus. *Biology and Fertility of Soils*, 45: 133-144.
- Suete, F., Samudin, S., dan Hasanah, U. 2017. Respon Pertumbuhan Padi Gogo (*Oryza sativa*) Kultivar Lokal pada Berbagai Tingkat Kelengasan Tanah. *Agrotekbis*, 5(2): 173-182.

- Sugiura, Y., Akiyama, R., Tanaka, S., Yano, K., Kameoka, H., Marui, S., Saito, M., Kawaguchi, M., Akiyama, K., and Saito, K. 2020. Myristate Can Be Used as a Carbon and Energy Source for the Asymbiotic Growth of Arbuscular Mycorrhizal Fungi. *PNAS*, 117(41): 25779-25788.
- Sukmasari, M.D. 2018. Pemanfaatan Mikoriza Arbuskular pada Tiga Kultivar Tanaman Kedelai (*Glycine max* L. Merrill) di Lahan Kering Majalengka. *Jurnal Ilmu Pertanian dan Peternakan*, 6(1): 1-7.
- Sulistiono, W., Taryono, T., Yudono, P., dan Irham, I. 2017. Early-Arbuscular Mycorrhizal Fungi-Application Improved Physiological Performances of Sugarcane Seedling and Further Growth in the Dry Land. *Journal of Agricultural Science*, 9(4).
- Sulistiyono, E., Suwarno., Lubis, I., dan Suhendar, D. 2012. Pengaruh Frekuensi Irigasi terhadap Pertumbuhan dan Produksi Lima Galur Padi Sawah. *Agrovigor*, 5(1): 1-8.
- Sumadji, A.R. 2020. Kerapatan Stomata dan Kaitannya terhadap Kekeringan pada Tanaman Padi Varietas Ir64. *Widya Warta*, 1: 43-54.
- Sun, J., Jia, Q., Li, Y., Zhang, T., Chen, J., Ren, Y., Dong, K., Xu, S., Shi, N-N., and Fu, S. 2022. Effects of Arbuscular Mycorrhizal Fungi and Biochar on Growth, Nutrient Absorption, and Physiological Properties of Maize (*Zea mays* L.). *Journal Fungi*, 8(12): 1275.
- Sun, Z., Song, J., Xin, X., Xie, X., and Zhao, B. 2018. Arbuscular Mycorrhizal Fungal Proteins 14-3-3- are Involved in Arbuscule Formation and Responses to Abiotic Stresses During AM Symbiosis. *Frontiers in Microbiology*, 5: 9-19.
- Suryani, R., Gafur, S., dan Abdurrahman, T. 2017. Respon Tanaman Bawang Merah terhadap Cendawan Mikoriza Arbuskula (CMA) pada Cekaman Kekeringan di Tanah Gambut. *Jurnal Pedon Tropika*, 3(1): 69-78.
- Suryanti, S., Indradewa, D., Sudira, P., dan Widada, J. 2015. Kebutuhan Air, Efisiensi Penggunaan Air, dan Ketahanan Kekeringan Kultivar Kedelai. *Jurnal Agritech*, 35(1): 114-120.
- Sutikno. 2018. *Buku Praktikum Mikroteknik Tumbuhan*. Yogyakarta: UGM Press.
- Swaef, T.D., Pieters, O., Appeltans, S., Borra-Serrano, I., Coudron, W., Couvreur, V., Garre, S., Lootens, P., Nicolai, B., Pols, L., Cast, C.S., Salagovic, J.,

- Haeverbeke, M.V., Stock, M., and Wyffels, F. 2022. On the Pivotal Role of Water Potential to Model Plant Physiological Processes. *In Silico Plants*, 4(1).
- Syamsia., Idhan, A., Noerfitriyani., Nadir, M., Reta, and Kadir, M. 2018. Paddy Chlorophyll Concentrations in Drought Stress Condition and Endophytic Fungi Application. *Earth and Environmental Science*, 156.
- Tabrizi, E.F.M. and Babashpour-Asl, M. 2021. Bio-fertilizer Impact on Production Efficiency and Yield of Corn (*Zea mays*) Cultivars Under Water Deficiency. *Agritech*, 41(1): 85-94.
- Tahani, N.A. 2016. Pengaruh *Acetyl Salicylic Acid* (ASA) terhadap Pertumbuhan Sawi (*Brassica juncea* L.) pada Kondisi Cekaman Kekeringan. Skripsi. *Tidak Dipublikasikan*. Universitas Islam Negeri Maulana Malik Ibrahim.
- Taiz, L. and Zeiger, E. 2002. *Plant Physiology*. Massachusetts: Sinauer Associates Inc. Publisher.
- Tambaru, E., Ura, R., dan Tuwo, M. 2018. Karakterisasi Stomata Daun Tanaman Obat *Anredera cordifolia* (Ten.) Steenis dan *Graptophyllum pictum* (L.) Griff. *Jurnal Ilmu Alam dan Lingkungan*, 9(17): 42-47.
- Tan, X., Xu, H., Khan, S., Equiza, M.A., Lee S.H., and Vaziriyeganeh, M. 2018. Plant Water Transport and Aquaporins in Oxygen-Deprived Environments. *Journal of Plant Physiology*, 227: 20-30.
- Thakur, J. and Shinde, B.P. 2020. Effect of Water Stress and AM Fungi on the Growth Performance of Pea Plant. *International Journal of Applied Biology*, 4(1).
- Tian, L., Chang, C., Ma, L., Nasir, F., Zhang, J., Li, W., Tran, L., and Tian, C. 2019. Comparative Study of the Mycorrhizal Root Transcriptomes of Wild and Cultivated Rice in Response to the Pathogen *Magnaporthe oryzae*. *Rice*, 12: 1-19.
- Tian, Y. and Deng, F. 2020. Phytochemistry and Biological Activity of Mustard (*Brassica juncea*): A Review. *Cyta- Journal of Food*, 18(1): 704-718.
- Tourneux, C., Devaux, A., Camacho, M.R., Mamani, P., dan Ledent, J.F. 2003. Efek Kekurangan Air pada Enam Genotipe Kentang di Dataran Tinggi Bolivia (I): Parameter Morfologi, Pertumbuhan dan Hasil. *Agronomi*, 23: 169-179.

- Utari, D. 2021. Respons Pertumbuhan dan Kadar Kapsaisin Tanaman Cabai Merah Keriting (*Capsicum annuum* L.) terhadap Kekeringan dan Pemberian Pupuk Mikoriza Arbuskular. Skripsi. *Tidak Dipublikasikan*. Universitas Gadjah Mada.
- Varone, L., Ribas-Carbo, M., Cardona, C., Gallé, A., Medrano, H., Gratani, L., and Flexas, J. 2012 Stomatal and Non-Stomatal Limitations to Photosynthesis in Seedlings and Saplings of Mediterranean Species Pre-Conditioned and Aged in Nurseries: Different Response to Water Stress. *Environmental and Experimental Botany*, 75: 235-247.
- Walter, M.H., Floss, D.S., and Strack, D. 2010. Apocarotenoids: Hormones, Mycorrhizal Metabolites and Aroma Volatiles. *Planta*, 232: 1-17.
- Wang, J.Y., Haider, I., Jamil, M., Fiorilli, V., Saito, Y., and Mi, J. 2019. The Apocarotenoid Metabolite Zaxinone Regulates Growth and Strigolactone Biosynthesis in Rice. *Nature Communications*, 10: 810.
- Wang, S., Ren, Y., Lina, H., Yuying, N., Shuyuan, Z., Xianan, X., Wentao, H., Hui, C., and Ming, T. 2023. Insights on the Impact of Arbuscular Mycorrhizal Symbiosis on *Eucalyptus grandis* Tolerance to Drought Stress. *American Society for Microbiology Journal*, 1-14.
- Wang, W., Shi, J., Xie, Q., Jiang, Y., Yu, N., and Wang, E. 2017. Nutrient Exchange and Regulation in Arbuscular Mycorrhizal Symbiosis. *Molecular Plant*, 10: 1147-1158.
- Wang, X., Ji, Q., and Xie, J. 2021. Absciscic Acid and Jasmonic Acid are Involved in Drought Priming-Induced Tolerance to Drought in Wheat. *The Crop Journal*, 9: 120-132.
- Wang, Y., Li, Y., Bao, X., Björn, L.O., Li, S., and Olsson, P.A. 2016. Response Differences of Arbuscular Mycorrhizal Fungi Communities in the Roots of an Aquatic and a Semiaquatic Species to Various Flooding Regimes. *Plant Soil*, 403: 361-373.
- Wang, Y., Qiu, Q., Yang, Z., Hu, Z., Tam, N., and Xin, G. 2009. Arbuscular Mycorrhizal Fungi in Two Mangroves in South China. *Plant and Soil*, 331: 181-191.

- Wang, Z., Guo, D., Wang, X., Zhang, B., and Wang, B. 2018. How Does Information Publicity Influence Residents Behaviour Intentions Around E-Waste Recycling?. *Resources, Conservation and Recycling*, 133: 1-9.
- Watts-Williams, S.J., Emmett, B.D., Levesque-Tremblay, V., MacLean, A.M., Sun, X., Satterlee, J.W., Fei, Z., and Harrison, M.J. 2018. Diverse *Sorghum bicolor* Accessions Show Marked Variation in Growth and Transcriptional Responses to Arbuscular Mycorrhizal Fungi. *Plant, Cell, and Environment*, 42(5): 1758-1774.
- Wibowo, H.Y. dan Sitawati. 2017. Respons Tanaman Kangkung Darat (*Ipomea reptans* Poir) dengan Interval Penyiraman pada Pipa Vertikal. *Journal of Agricultural Science*, 2(2): 148-154.
- Widiati, R., Idrus, M.I., dan Imran, A.N. 2015. Isolasi dan Identifikasi Mikoriza Vesikular Arbuskular (MVA) pada Rhizosfer Tanaman Jagung (*Zea mays* L.) di Desa Samangki Kecamatan Simbang Kabupaten Maros. *Agrokompleks*, 14(1): 55-60.
- Widiati, R., Musa, Y., Ala, A., dan Farid, M.B. 2014. Stomatal Performance of Soybean Genotypes Due to Drought Stress and Acidity. *International Journal of Scientific & Technology Research*, 3(11): 270-275.
- Wolf, S., Mravec, J., Greiner, S., Mouille, G., and Hofte, H. 2012. Plant Cell Wall Homeostasis is Mediated by Brassinosteroid Feedback Signaling. *Current Biology*, 22(18): 1732-1737.
- Wu, H.H., Zou, Y.N., Rahman, M.M., Ni, Q.D., and Wu, Q.S. 2017. Mycorrhizas Alter Sucrose and Proline Metabolism in Trifoliate Orange Exposed to Drought Stress. *Scientific Reports*, 7: 4239.
- Wu, Q.S. and Zou, Y.N. 2017. *Arbuscular Mycorrhizal Fungi and Tolerance of Drought Stress in Plants*. Singapore: Springer.
- Wu, Q.S., Cao, M.Q., Zou, Y.N., Wu, C., and He, X.H. 2016. Mycorrhizal Colonization Represents Functional Equilibrium on Root Morphology and Carbon Distribution of Trifoliate Orange Grown in a Split-Root System. *Scientia Horticulturae*, 199: 95-102.
- Wu, Q.S., Srivastava, A.K., and Zou, Y.N. 2013. AMF-induced Tolerance To Drought Stress in Citrus: A Review. *Scientia Horticulturae*, 164: 77-87.

- Wu, T., Pan, L., Zipori, I., Mao, J., Li, R., Yongpeng, L., Yongjie, L., Jing, Y., and Haiyun, C. 2022. Arbuscular Mycorrhizal Fungi Enhanced the Growth, Phosphorus Uptake and Pht Expression of Olive (*Olea europaea* L.) Plantlets. *PeerJ*, 1-20.
- Xinyi, Y., Meiqi, L., Yufei, W., Yiran, W., Zhijie, L., and Su C. 2021. Response Mechanism of Plants to Drought Stress. *Horticulture*, 7(50): 1-36.
- Xu, Z. and Zhou, G. 2008. Responses of Leaf Stomatal Density to Water Status and its Relationship with Photosynthesis in a Grass. *Journal of Experimental Botany*, 59(12): 3317-3325.
- Xue, R., Shen, T., and Marschner, P. 2017. Soil Water Content During and After Plant Growth Influence Nutrient Availability and Microbial Biomass. *Journal of Soil Science and Plant Nutrition*, 17(3): 702-715.
- Yang, Q., Zhao, Z., Bai, Z., Hou, H., Yuan, Y., Guo, A., and Li, Y. 2019. Effects of Mycorrhizal and Water Conditions on Perennial Ryegrass Growth in Rare Earth Tailings. *RSC Advances*, 9(19): 10881-10888.
- Yang, X., Lu, M., Wang, Y., Wang, Y., Liu, Z., and Chen, S. 2021. Response Mechanism of Plants to Drought Stress. *Horticulturae*, 7: 1-36.
- Yooyongwech, S., Samphumphuang, T., Tisarum, R., Theerawitaya, C., and Chaum, S. 2016. Arbuscular Mycorrhizal Fungi (AMF) Improved Water Deficit Tolerance in Two Different Sweet Potato Genotypes Involves Osmotic Adjustments Via Soluble Sugar and Free Proline. *Scientia Horticulturae*, 198: 107-117.
- Zagoto, A.D.P. 2019. Respon Anatomi Daun Beberapa Varietas *Oryza sativa* L. terhadap Cekaman Kekeringan di Sumatera Barat. Skripsi. *Tidak Dipublikasikan*. Universitas Negeri Padang.
- Zare-Maivan, H., Khanpour-Ardestani, N., and Ghanati, F. 2015. Influence of Mycorrhizal Fungi on Growth, Chlorophyll Content, and Potassium and Magnesium Uptake in Maize. *Journal of Plant Nutrition*, 40(14).
- Zeng, Y., Guo, L.P., Chen, B.D., Hao, Z.P., Wang, J.Y., Huang, L.Q., Yang, G., Cui, X.M., Yang, L., Wu, Z.X., Chen, M.L., and Zhang, Y. 2013. Arbuscular Mycorrhizal Symbiosis and Active Ingredients of Medicinal Plants: Current Research Status and Prospectives. *Mycorrhiza*, 23(4): 253-265.

- Zhang, F., Zou, Y.N., and Wu, Q.S. 2018. Quantitative Estimation of Water Uptake by Mycorrhizal Extraradical Hyphae in Citrus Under Drought Stress. *Scientia Horticulturae*, 229: 132-136.
- Zhang, F., Zou, Y.N., Wu, Q.S., and Kuca, K. 2020. Arbuscular Mycorrhizal Modulate Root Polyamine Metabolism to Enhance Drought Tolerance of Trifoliate Orange. *Environmental and Experimental Botany*, 171.
- Zhang, Q., Peng, S., and Li, Y. 2019. Increase Rate of Light-Induced Stomatal Conductance is Related to Stomatal Size in the Genus *Oryza*. *Journal of Experimental Botany*, 70: 5259-5269.
- Zhang, Z., Zhang, J., and Huang, Y. 2014. Effects of Arbuscular Mycorrhizal Fungi on the Drought Tolerance of *Cyclobalanopsis glauca* Seedlings Under Greenhouse Conditions. *New Forest*, 45: 545-556.
- Zhao, W., Sun, Y., Kjellgren, R., and Liu, X. 2015. Response of Stomatal Density and Bound Gas Exchange in Leaves of Maize to Soil Water Deficit. *Acta Physiologiae Plantarum*, 37(1): 1704.
- Zhou, R., Yu, X., Ottosen, C.O., Rosenqvist, E., Zhao, L., Wang, Y., Yu, W., Zhao, T., and Wu, Z. 2017. Drought Stress Had a Predominant Effect Over Heat Stress on Three Tomato Cultivars Subjected to Combined Stress. *BMC Plant Biology*, 17-24.
- Zhu, J.K. 2016. Abiotic Stress Signaling and Responses in Plants. *Cell*, 167: 313-324.
- Zhu, X., Cao, Q., Sun, L., Yang, X., Yang, W., and Zhang, H. 2018. Stomatal Conductance and Morphology of Arbuscular Mycorrhizal Wheat Plants Response to Elevated CO₂ and NaCl Stress. *Frontiers in Plant Science*, 9: 1-10.
- Zhu, X., Song, F., and Liu, S. 2011. Arbuscular Mycorrhizal Impacts on Drought Stress of Maize Plants by Lipid Peroxidation, Proline Content and Activity of Antioxidant System. *Journal of Food, Agriculture and Environment*, 9(2): 583-587.
- Zhu, X., Song, F., Liu, S.Q., Liu, T., and Xin, Z. 2012. Arbuscular Mycorrhizal Improves Photosynthesis and Water Status of *Zea mays* L. Under Drought Stress. *Plant, Soil and Environment*, 58(4): 186-191.

Zhu, X.Q., Tang, M., and Zhang, H.Q. 2017. Arbuscular Mycorrhizal Fungi Enhanced the Growth, Photosynthesis, and Calorific Value of Black Locust Under Salt Stress. *Photosynthetica*, 55: 378-385.