



DAFTAR PUSTAKA

- Adugna, G. (2018). A review on impact of compost on soil properties, water use and crop productivity. *Article in Agricultural Science Research Journal*, 4(3), 93–104. <https://doi.org/10.14662/ARJASR2016.010>
- Angelova, V. R., Akova, V. I., Artinova, N. S., & Ivanov, K. I. (2013). The effect of organic amendments on soil chemical characteristics. *Bulgarian Journal of Agricultural Science*, 19(5), 958–971.
- Aziez, A. F., Suprapti, E., Budiyono, A., & Wardiyanto, A. K. (2021). Pengaruh kadar lengas tanah pada berbagai fase pertumbuhan terhadap pertumbuhan dan hasil kedelai the effect of soil moisture in various growth stage to the growth and yield of soybean. *Jurnal Imiah Agrineca*, 6698, 34–41.
- Bahadur, A., Batool, A., Nasir, F., Jiang, S., Mingsen, Q., Zhang, Q., Pan, J., Liu, Y., & Feng, H. (2019). Mechanistic insights into arbuscular mycorrhizal fungi-mediated drought stress tolerance in plants. *International Journal of Molecular Sciences*, 20(17), 1–18. <https://doi.org/10.3390/ijms20174199>
- Barasa, P. M., Botai, C. M., Botai, J. O., & Mabhaudhi, T. (2021). A review of climate-smart agriculture research and applications in Africa. *Agronomy*, 11(6). <https://doi.org/10.3390/agronomy11061255>
- BNPB. (2023). Kekeringan di Pulau Jawa. Badan Nasional Penanggulangan Bencana. <https://data.bnrb.go.id/pages/kekeringan-pulau-jawa>
- Bouzeriba, T. . A., Mejjin, A. . A.-A., Mikaeel, Y. F., Dennis, S. A., Ahmed, A. A., & Peter, D. S. (2021). Effects of arbuscular mycorrhizal fungi on growth and phosphorus uptake of maize (*Zea mays L.*) at different levels of soil phosphorus and soil moisture. *Journal of Dryland Agriculture*, 7(3), 22–33. <https://doi.org/10.5897/joda2020.0063>
- BPBD. (2019, 15 Desember). Siaga bencana kekeringan. Badan Penanggulangan Bencana Daerah Kabupaten Grobogan. <https://bpbd.grobogan.go.id/berita/Siaga-Bencana-Kekeringan>.
- Chagas Torres, L., Keller, T., Paiva de Lima, R., Antônio Tormena, C., Veras de Lima, H., & Fabíola Balazero Giarola, N. (2021). Impacts of soil type and crop species on permanent wilting of plants. *Geoderma*, 384(October 2020). <https://doi.org/10.1016/j.geoderma.2020.114798>
- Coulibaly, S. S., Kouassi, K. I., Koffi, K. K., & Zoro, B. I. A. (2019). Effect of compost from different animal manures on maize (*Zea mays*) growth. *Journal of Experimental Biology and Agricultural Sciences*, 7(2), 178–185. [https://doi.org/10.18006/2019.7\(2\).178.185](https://doi.org/10.18006/2019.7(2).178.185)
- Dodig, D., Božinović, S., Nikolić, A., Zorić, M., Vančetović, J., Ignjatović-Micić, D., Delić, N., Weigelt-Fischer, K., Altmann, T., & Junker, A. (2021). Dynamics of Maize Vegetative Growth and Drought Adaptability Using Image-Based Phenotyping Under Controlled Conditions. *Frontiers in Plant Science*, 12(May), 1–18. <https://doi.org/10.3389/fpls.2021.652116>
- El-Gazzar, N., El-Bakery, A., & Ata, A. (2018). Influence of some bioagents and



- chitosan nanoparticles on controlling maize late wilt and improving plants characteristics. *Egyptian Journal of Phytopathology*, 46(2), 243–264. <https://doi.org/10.21608/ejp.2018.115896>
- Fawen, L., Manjing, Z., Yong, Z., & Rengui, J. (2023). Influence of irrigation and groundwater on the propagation of meteorological drought to agricultural drought. *Agricultural Water Management*, 277, 108099. <https://doi.org/10.1016/j.agwat.2022.108099>
- Firdauzi, L. B., & Suarma, U. (2023). Analysis of rainfall variability and shifts in season in relation to the rice cultivation period in Sleman Regency. *IOP Conference Series: Earth and Environmental Science*, 1233(1). <https://doi.org/10.1088/1755-1315/1233/1/012052>
- Fitria, F., Syawal Harahap, F., & Walida, H. (2020). Derajat infeksi mikoriza pada persiapan lahan dan pengelolaan gulma di tiga kabupaten Di Provinsi Sumatera Utara. *Jurnal Tanah Dan Sumberdaya Lahan*, 7(1), 177–180. <https://doi.org/10.21776/ub.jtsl.2020.007.1.22>
- Geng, S. M., Yan, D. ., Zhang, T. ., Weng, B. ., Zhang, Z. ., & Gang, W. (2014). Effects of extreme drought on agriculture soil and sustainability of different drought soil. *Hydrology and Earth System Sciences Discussion*, 11, 1–29. <https://doi.org/10.5194/hessd-11-1-2014>
- Huang, S., Huang, Q., Chang, J., Leng, G., & Xing, L. (2015). The response of agricultural drought to meteorological drought and the influencing factors: A case study in the Wei River Basin, China. *Agricultural Water Management*, 159, 45–54. <https://doi.org/10.1016/j.agwat.2015.05.023>
- Indian Institute of Maize Research. (2015). Maize Biology. https://iimr.icar.gov.in/?page_id=1785
- Karmen, R. F. (2023). Analisis resiko bencana akibat musim kemarau berkepanjangan di Jawa Timur. *Prosiding Seminar Nasional*, 947–957.
- Lestari, D., Adiwirman, Wawan, Andriani, M., & Wardani, D. K. (2020). Pengaruh cekaman kekeringan dan pemberian pupuk k terhadap fisiologis dan pertumbuhan tanaman jagung manis (*Zeamays L. Var saccharata Sturt*). *Jurnal Ilmiah Inovasi*, 20(2), 5–9.
- Lisboa, M. S., Schneider, R. L., Sullivan, P. J., & Walter, M. T. (2020). Drought and post-drought rain effect on stream phosphorus and other nutrient losses in the Northeastern USA. *Journal of Hydrology: Regional Studies*, 28(February), 100672. <https://doi.org/10.1016/j.ejrh.2020.100672>
- Mustaqim, A. (2023). Belasan Desa di Sleman DIY Krisis Air Bersih. <https://www.medcom.id/nasional/daerah/nbwP4jmk-belasan-desa-di-sleman-diy-krisis-air-bersih>
- Nurwanto, I.,&Tirtana, G. A. (2023). Kekeringan di Sleman meluas ke delapan Kapanewon, sebanyak 2,2 juta liter air bersih sudah di-droping. <https://radarjogja.jawapos.com/sleman/653169901/kekeringan-di-sleman-meluas-ke-delapan-kapanewon-sebanyak-22-juta-liter-air-bersih-sudah-di-droping>.



- Oktafitria, D., Febriyantiningrum, K., Nurfitria, N., Jadid2, N., Kristanti, Purwani, I., Sumarsih, N., Khotimah, H., Purnomo, E., & Dewi Hidayati. (2019). Eksplorasi mikoriza vesikula arbuskula (mva) pada lahan revegetasi pasca tambang batu kapur dan status infeksinya terhadap akar jagung (*Zea mays*). *Prosiding Seminar Nasional*, 63–70.
- Pramudia, A., Apriyana, Y., Adi, S. H., Kartika, B., Suciantini, Misnawati, & Firda, D. (2021). Cropping calendar analysis for dry season 2020 in Indonesia. *IOP Conference Series: Earth and Environmental Science*, 648(1), 1–12. <https://doi.org/10.1088/1755-1315/648/1/012117>
- Ramos, M. C. (2017). Effects of compost amendment on the available soil water and grape yield in vineyards planted after land levelling. *Agricultural Water Management*, 191, 67–76. <https://doi.org/10.1016/j.agwat.2017.05.013>
- Riwandi, Handajaningsih, M., & Hasanudin. (2014). *Teknik Budidaya Jagung dengan Sistem Organik di lahan Marjinal* (Suhendra (ed.); 1st ed.). UNIB Press.
- Rohani, R., Ruswandi, D., Syafi'i, M., & Saputro, N. W. (2021). Identifikasi karakteristik morfologi jagung hibrida unpad dengan sistem tumpangsari tanaman jagung (*Zea Mays L.*) dengan kedelai (*Glycine Max L.*) dan ubi jalar (*Ipomea Batatas L.*) identification of morphological characteristics of hybrid corn from UNP. *Um-Tapsel*, 6(2), 185–190.
- Scotti, R., Bonanomi, G., Scelza, R., Zoina, A., & Rao, M. A. (2015). Organic amendments as sustainable tool to recovery fertility in intensive agricultural systems. *Journal of Soil Science and Plant Nutrition*, 15(2), 333–352. <https://doi.org/10.4067/s0718-95162015005000031>
- Seleiman, M. F., Al-Suhaibani, N., Ali, N., Akmal, M., Alotaibi, M., Refay, Y., Dindaroglu, T., Abdul-Wajid, H. H., & Battaglia, M. L. (2021). Drought stress impacts on plants and different approaches to alleviate its adverse effects. *Plants*, 10(2), 1–25. <https://doi.org/10.3390/plants10020259>
- Siebers, M. H., Slattery, R. A., Yendrek, C. R., Locke, A. M., Drag, D., Ainsworth, E. A., Bernacchi, C. J., & Ort, D. R. (2017). Simulated heat waves during maize reproductive stages alter reproductive growth but have no lasting effect when applied during vegetative stages. *Agriculture, Ecosystems and Environment*, 240, 162–170. <https://doi.org/10.1016/j.agee.2016.11.008>
- Sivakumar, M. V. K., Motha, R. P., Wilhite, D. A., & Wood, D. A. (2010). Quantification of agricultural drought for effective drought mitigation and preparedness: key issues and challenges. *Agricultural Drought Indices Proceedings of a WMO Expert Meeting Held in Murcia, Spain, June, 2015*.
- Song, L., Jin, J., & He, J. (2019). Effects of severe water stress on maize growth processes in the field. *Sustainability (Switzerland)*, 11(18). <https://doi.org/10.3390/su11185086>
- Suharno, Tanjung, R. H. R., & Sufaati, S. (2020). *Fungi mikoriza arbus kula mempercepat rehabilitasi lahan tambang*.
- Suleman, R., Kandowangko, N. Y., & Abdul, A. (2019). Karakterisasi morfologi dan analisis proksimat jagung (*zea mays*, l.) varietas momala gorontalo. *Jambura*



- Edu Biosfer Journal*, 1(2), 72–81. <https://doi.org/10.34312/jebj.v1i2.2432>
- Sun, P., Liu, R., Yao, R., Shen, H., & Bian, Y. (2023). Responses of agricultural drought to meteorological drought under different climatic zones and vegetation types. *Journal of Hydrology*, 619(February), 129305. <https://doi.org/10.1016/j.jhydrol.2023.129305>
- Sun, X., Lai, P., Wang, S., Song, L., Ma, M., & Han, X. (2022). Monitoring of extreme agricultural drought of the past 20 years in Southwest China using GLDAS soil moisture. *Remote Sensing*, 14(6), 1–21. <https://doi.org/10.3390/rs14061323>
- Suryani, I., Nontji, M., & Juita, N. (2021). Morphological characteristics and classification of inceptisol in Mamuju Regency, West Sulawesi. *IOP Conference Series: Earth and Environmental Science*, 807(4). <https://doi.org/10.1088/1755-1315/807/4/042043>
- Wang, W., Ertsen, M. W., Svoboda, M. D., & Hafeez, M. (2016). Propagation of drought: From meteorological drought to agricultural and hydrological drought. *Advances in Meteorology*. <https://doi.org/10.1155/2016/6547209>
- Waseem, M., Ahmad, I., Mujtaba, A., Tayyab, M., Si, C., Lü, H., & Dong, X. (2020). Spatiotemporal dynamics of precipitation in southwest arid-agriculture zones of Pakistan. *Sustainability (Switzerland)*, 12(6). <https://doi.org/10.3390/su12062305>
- Wijayanto, T., Ginting, C., Boer, D., & Ode Afu, W. (2014). Ketahanan sumberdaya genetik jagung sulawesi tenggara terhadap cekaman kekeringan pada berbagai fase vegetatif. *Jurnal Agroteknos*, 4(2), 102–107.
- WMO. (1988). Drought and desertification in Asia. CAgM Report No. 32 prepared by G. Appa Rao. WMO TD No. 285, World Meteorological Organization, Geneva.
- WMO. (1992). Monitoring, Assessment and Combat of Drought and Desertification. Report prepared by CAgM-IX Working group on Monitoring, Assessment and Combat of Drought and Desertification. CAgM Report No. 47. WMO TD No. 505, World Meteorological Organization, Geneva.
- WMO. (2012). Standardized precipitation index user guide. In *Chair, Publication Board* (Issue 3).
- Yao, N., Li, Y., Liu, Q., Zhang, S., Chen, X., Ji, Y., Liu, F., Pulatov, A., & Feng, P. (2022). Response of wheat and maize growth-yields to meteorological and agricultural droughts based on standardized precipitation evapotranspiration indexes and soil moisture deficit indexes. *Agricultural Water Management*, 266(February). <https://doi.org/10.1016/j.agwat.2022.107566>
- Yulihastin, E., Putranto, M. F., & Suaydhi. (2021). The effect of local forcing on anomalously high rainfall during dry season in Java, Indonesia. *Journal of Southwest Jiaotong University*, 56(3), 32–42. <https://doi.org/10.35741/issn.0258-2724.56.3.3>
- Zhou, Z., Shi, H., Fu, Q., Ding, Y., Li, T., Wang, Y., & Liu, S. (2021). Characteristics of propagation from meteorological drought to hydrological



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drought in the pearl river basin. *Journal of Geophysical Research: Atmospheres*, 126(4), 1–20. <https://doi.org/10.1029/2020JD033959>

Zou, Y. N., Zhang, F., Srivastava, A. K., Wu, Q. S., & Kuča, K. (2021). Arbuscular mycorrhizal fungi regulate polyamine homeostasis in roots of trifoliate orange for improved adaptation to soil moisture deficit stress. *Frontiers in Plant Science*, 11(January), 1–11. <https://doi.org/10.3389/fpls.2020.600792>