DAFTAR PUSTAKA

Abel, G., Suntari, R., & Citraresmini, A. 2021. Pengaruh Biochar Sekam Padi dan Kompos Terhadap C Oganik, N Total, C/N Tanah, Sserapan N,Dan Pertumbuhan Tanaman Jagung Di Ultisol. *Jurnal Tanah dan Sumberdaya Lahan*, 8(2): 451-460. https://doi.org/10.21776/ub.jtsl.2021.008.2.16

Abid, M., Tian, Z., Ata-Ul-Karim, S. T., Cui, Y., Liu, Y., Zahoor, R., Jiang, D., & Dai, T. 2016. Nitrogen nutrition improves the potential of wheat (*Triticum aestivum* L.) to alleviate the effects of drought stress during vegetative growth periods. *Frontiers in Plant Science*, *7*(981): 1-14. https://doi.org/10.3389/fpls.2016.00981

Ahmad, H., & Li, J. (2021). Impact of water deficit on the development and senescence of tomato roots grown under various soil textures of Shaanxi, China. *BMC Plant Biology*, *21*(241): 1-16. https://doi.org/10.1186/s12870-021-03018-1

Akram, M. Z., Libutti, A., & Rivelli, A. R. 2024. Drought stress in quinoa: Effects, responsive mechanisms, and management through Biochar amended soil: A review. *Agriculture*, *14*(8): 1-25. https://doi.org/10.3390/agriculture14081418

Aldaour, A. F., & Abu-Naser, S. S. 2019. An Expert System for Diagnosing Tobacco Diseases Using CLIPS. *International Journal of Academic Engineering Research (IJAER)*, *3*(3):12-18. https://www.researchgate.net/publication/332155032_An_Expert_System_for_Diagnosing_Tobacco_Diseases_Using_CLIPS

Al Farisy, M. I., & Jadid, N. 2018. Pengaruh pra-perlakuan paraquat Terhadap Kandungan Asam Askorbat pada Tembakau (Nicotiana tabacum L.) Var. MKY Yang Dicekam Kekeringan. Jurnal Sains dan Seni ITS, 7(1): 5-8. https://doi.org/10.12962/j23373520.v7i1.29847

Armiadi. 2009. Penambatan Nitrogen Secara Biologis Pada Tanaman Leguminosa. *Wartazoa*, *19*(1): 23-30. https://core.ac.uk/download/236128283.pdf

Astuti, R. B., Suedy, S. W., Nurchayati, Y., & Setiari, N. 2022. Pertumbuhan Kantong Semar (*Nepenthes mirabilis* (Lour.) Druce) Pada Berbagai media Tanam. *Metamorfosa: Journal of Biological Sciences*, 9(1): 60-68. https://doi.org/10.24843/METAMORFOSA.2022.V09.I01.P06

Banasiak, J., Borghi, L., Stec, N., Martinoia, E., & Jasiński, M. 2020. The full-size ABCG transporter of *Medicago truncatula* is involved in Strigolactone secretion, affecting *Arbuscular mycorrhiza*. *Frontiers in Plant Science*, 11(18): 1-14. https://doi.org/10.3389/fpls.2020.00018

Basu, S., Ramegowda, V., Kumar, A., & Pereira, A. 2016. Plant adaptation to drought stress. *F1000Research*, 5(1): 1-10. https://doi.org/10.12688/f1000research.7678.1

Bloch, D., Puli, M. R., Mosquna, A., & Yalovsky, S. 2019. Abiotic stress modulates root patterning via ABA-regulated *microRNA* expression in the endodermis initials. *Development*, *146*: 1-68. https://doi.org/10.1242/dev.177097

Bucher S.F., Auerswald K., Grün-Wenzel C., and Higgins, S. I. 2017 Stomatal traits relate to habitat preferences of herbaceous species in a temperate climate. *Flora*, 229:107–15. https://doi.org/10.1016/j.flora.2017.02.011

Chen, M. 2021. The tea plant leaf cuticle: From plant protection to tea quality. *Frontiers in Plant Science*, *12*(1): 1-13. https://doi.org/10.3389/fpls.2021.751547

Chen, J., Liu, L., Wang, Z., Zhang, Y., Sun, H., Song, S., Bai, Z., Lu, Z., & Li, C. 2020. Nitrogen fertilization increases root growth and coordinates the root–shoot relationship in cotton. *Frontiers in Plant Science*, *11*: 1-13. https://doi.org/10.3389/fpls.2020.00880

Coneva, V., & Chitwood, D. H. 2018. Genetic and developmental basis for increased leaf thickness in the arabidopsis Cvi ecotype. *Frontiers in Plant Science*, 9: 1-10. https://doi.org/10.3389/fpls.2018.00322

Dariva, F. D., Copati, M. G., Pessoa, H. P., Alves, F. M., Dias, F. D., Picoli, E. A., Da Cunha, F. F., & Nick, C. 2020. Evaluation of anatomical and physiological traits of *Solanum pennellii* cor. associated with plant yield in tomato plants under water-limited conditions. *Scientific Reports*, *10*(1): 1-13. https://doi.org/10.1038/s41598-020-73004-4

Darmanti, S. 2009. Struktur dan Perkembangan Daun *Acalypha indica* L yang Diperlakukan dengan Kombinasi IAA dan GA Pada Konsentrasi yang Berbeda. *BIOMA*, *11*(1): 17-22. https://doi.org/10.14710/bioma.11.1.17-22

Darso, W. A., Elizabeth, K., & Habi, M. L. 2020. Pengaruh Pupuk Organik Cair dan Urea Terhadap Kemasaman, N-total, Serapan N, Serta Produksi Tanaman Selada (*Lactuca sativa* L). *Jurnal Budidaya Pertanian*, 19(2): 142-148. https://doi.org/10.30598/jbdp.2023.19.2.142

Dehgan, B. 2023. *Garden Plants Taxonomy*. Springer International Publisher. New York. https://doi.org/10.1007/978-3-031-11561-5

Ding, F., Wang, G., Wang, M., & Zhang, S. 2018. Exogenous melatonin improves tolerance to water deficit by promoting cuticle formation in tomato plants. *Molecules*, *23*(7): 1-10. https://doi.org/10.3390/molecules23071605

Drake PL, de Boer HJ, Schymanski SJ et al. 2019. Two sides to every leaf: water and CO2 transport in hypostomatous and amphistomatous leaves. *New Phytol*, 222: 1179–87. https://doi.org/10.1111/nph.15652

Drake PL, Froend RH, Franks PJ. 2013. Smaller, faster stomata: scaling of stomatal size, rate of response, and stomatal conductance. *J Exp Bot*, 64: 495–505. https://doi.org/10.1093/jxb/ers347

Driesen, E., De Proft, M., & Saeys, W. 2023. Drought stress triggers alterations of adaxial and abaxial stomatal development in basil leaves increasing water-use efficiency. *Horticulture Research*, *10*(6): 1-14. https://doi.org/10.1093/hr/uhad075

Erawan, D., W.O. Yani dan A. Bahrun. 2013. Pertumbuhan dan Hasil Tanaman Sawi (*Brassica juncea* L.) pada Berbagai Dosis Pupuk Urea. Jurnal Agroteknos. 3(1): 19-25. https://jamp-jurnal.unmerpas.ac.id/index.php/jamppertanian/article/view/57/55

Fahmi, A., Syamsudin, Utami, S. N. H., & Radjagukgu, B. 2010. Pengaruh Interaksi Hara Nitrogen Dan Fosfor Terhadap Pertumbuhan Tanaman Jagung (*Zea Mays* L) Pada Tanah Regosol Dan Latosol1. *Berita Biologi*, 10(3): 297-304. https://media.neliti.com/media/publications/68518-ID-none.pdf

Fan, D., Dang, Q., Yang, X., Liu, X., Wang, J., & Zhang, S. 2022. Nitrogen

deposition increases xylem hydraulic sensitivity but decreases stomatal sensitivity to water potential in two temperate deciduous tree species. *Science of The Total Environment*, *848*: 1-10. https://doi.org/10.1016/j.scitotenv.2022.157840

Fathi, A. 2022. Role of nitrogen (N) in plant growth, photosynthesis pigments, and N use efficiency: A review. *Agrisost* , *28*: 1-8. https://doi.org/10.5281/zenodo.7143588

Fattah, M. N., & Widyasamratri, H. 2024. Analisis potensi rawan bencana kekeringan menggunakan sistem informasi geografis. *Jurnal Kajian Ruang*, 4(1): 78-93. https://jurnal.unissula.ac.id/index.php/kr/article/view/35587

Gan, Y., Zhou, L., Shen, Z.-J., Shen, Z.-X., Zhang, Y.-Q. and Wang, G.-X. 2010 Stomatal clustering, a new marker for environmental perception and adaptation in terrestrial plants. *Bot. Stud*. 51: 325–336. https://ejournal.sinica.edu.tw/bbas/content/2010/3/Bot513-06/Bot513-06.html

Global Biodiversity Information Facility (GBIF). 2024. Clasification of *Nicotiana tabacum L*. https://www.gbif.org/species/2928774. [diakses tanggal 24 Maret 2024]

Gu, J., Li, Z., Mao, Y., Struik, P.C., Zhang, H., Liu, L., and Yang, J. 2018. Roles of nitrogen and cytokinin signals in root and shoot communications in maximizing of plant productivity and their agronomic applications. *Plant Sci*, 274: 320–331. https://doi.org/10.1016/j.plantsci.2018.06.010

Guo, F. Q., Young, J., & Crawford1, N. M. 2003. The Nitrate Transporter AtNRT1.1 (CHL1) Functions in Stomatal Opening and Contributes to Drought Susceptibility in Arabidopsis. *The Plant Cell*, *15*(1): 107–117. https://doi.org/10.1105/tpc.006312

Hacke, U. G., Plavcova, L., Almeida-Rodriguez, A., King-Jones, S., Zhou, W., & Cooke, J. E. 2010. Influence of nitrogen fertilization on xylem traits and aquaporin expression in stems of hybrid poplar. *Tree Physiology*, *30*(8), 1016-1025. https://doi.org/10.1093/treephys/tpq058

Handayani, T., Kusmana, & Kurniawan, H. 2018. Respon Dan Seleksi Tanaman Kentang Terhadap Kekeringan (Response and selection of potato plants to drought). *Jurnal Hortikultura*, 28(2): 163-178. https://media.neliti.com/media/publications/272559-respon-dan-seleksi-tanaman-kentang-terha-1f65d660.pdf

Heneidy, S. Z., Al-Sodany, Y. M., Fakhry, A. M., Kamal, S. A., Halmy, M. W .A. ,Bidak, L. M., El Kenany, E. T., & Toto, S. M. 2024. Biology of *Nicotiana glutinosa* L., a newly recorded species from an archaeological excavation site in Egypt. *BMC Plant Biology*, 24(1):1-15. https://doi.org/10.1186/s12870-024-04816-z

Hepworth, C., Doheny-Adams, T., Hunt, L., Cameron, D. D., & Gray, J. E. 2015. Manipulating stomatal density enhances drought tolerance without deleterious effect on nutrient uptake. *New Phytologist*, *208*(2): 336-341. https://doi.org/10.1111/nph.13598

Herlina, N., Azizah, N., & Putra Pradiga, E. 2020. Pengaruh Suhu Dan Curah Hujan terhadap Produktivitas Tembakau (*Nicotiana tabacum* L.) Di Kabupaten Malang. Plantropica: *Journal of Agricultural Science*, 5(1): 52-

63. https://doi.org/10.21776/ub.jpt.2020.005.1.7

Hernandez-Espinoza, L. H., & Barrios-Masias, F. H. 2020. Physiological and anatomical changes in tomato roots in response to low water stress. Scientia Horticulturae, 265(1): 1-9. https://doi.org/10.1016/j.scienta.2020.109208

Hetherington, A.M. and Woodward, F.I. 2003 The role of stomata in sensing and driving environmental change. *Nature,* 424: 901–908. https://doi.org/10.1038/nature01843

He, M., & Dijkstra, F. A. 2014. Drought effect on plant nitrogen and phosphorus: A meta-analysis. *New Phytologist*, *204*(4): 924-931. https://doi.org/10.1111/nph.1295

Hidayat, A. N., Mustofa, A., & Cintamulya, I. 2023. Kerapatan stomata pada Daun Mangga (Mangifera indica) Di Kawasan PT semen Gresik Pabrik Tuban Kecamatan Kerek Kabupaten Tuban. *Jurnal Biologi UNAND*, 12(2): 73-78. https://doi.org/10.25077/jbioua.12.2.73-78.2024

Husna, L. A., & Nugroho, L. H. 2024. Struktur Anatomis Dan Uji Histokimia Kulit Buah naga Merah (*Hylocereus polyrhizus* (Web.) Britton & Rose). *Al-Kauniyah: Jurnal Biologi*, *17*(1): 21-31. https://doi.org/10.15408/kauniyah.v16i2.1.23602

Hu, Y., & Schmidhalter, U. 2005. Drought and salinity: A comparison of their effects on mineral nutrition of plants. *Journal of Plant Nutrition and Soil Science*, *168*(4), 541-549 https://doi.org/10.1002/jpln.200420516

Irwandi, H., Iskandar, M., Kurniawan, E., & Megalina, Y. 2018. The Influence of El Niño on Rainfall Variability in North Sumatra Province. FISITEK : Jurnal Ilmu Fisika Dan Teknologi, 1(2): 7–15. http://dx.doi.org/10.30821/fisitek.v1i2.1319

Iswiyanto, A., Radian, R., & Abdurrahman, T. 2023. Pengaruh nitrogen Dan fosfor terhadap pertumbuhan Dan hasil kedelai edamame pada tanah gambut. *Jurnal Sains Pertanian Equator*, *12*(1): 95-102. https://doi.org/10.26418/jspe.v12i1.60354

Iqbal, A., Dong, Q., Wang, X., Gui, H., Zhang, H., Zhang, X., & Song, M. 2020. High nitrogen enhance drought tolerance in cotton through antioxidant enzymatic activities, nitrogen metabolism and osmotic adjustment. *Plants*, *9*(178): 1-22. https://doi.org/10.3390/plants9020178

Juanda, B. R. 2015. Antisipaso Perubahan Iklim Melalui Pengelolaan Lingkungan Pertanaman Untuk Produksi dan Ketahanan Pangan Berkelanjutan. *Agrosamudra*, 2(2): 61-70. https://ejurnalunsam.id/index.php/jagrs/article/download/324/244

Kabir, N., Wahid, S., Rehman, S. U., & Qanmber, G. (2024). The intricate world of trichome development: From signaling pathways to transcriptional regulation. *Environmental and Experimental Botany*, *217*(105549), 1-16. https://doi.org/10.1016/j.envexpbot.2023.105549

Kang, J.H.,Liu, G., Shi, F., Jones, A.D., Beaudry, R.M., Howe, G.A. 2010. The tomato odorless-2 mutant is defective in trichome-based production of diverse specialized metabolites and broad-spectrum resistance to insect herbivores. *Plant Physiol*, 154 : 262–272. https://doi.org/10.1104/pp.110.160192

Kang, J., Peng, Y., & Xu, W. 2022. Crop Root Responses to Drought Stress: Molecular Mechanisms, Nutrient Regulations, and Interactions with

Microorganisms in the Rhizosphere. *Int. J. Mol. Sci*, *23*(9310): 1-26. https://doi.org/10.3390/ijms23169310

Khan, R., Ma, X., Hussain, Q., Chen, K., Farooq, S., Asim, M., Ren, X., Shah, S., & Shi, Y. 2023. Transcriptome and anatomical studies reveal alterations in leaf thickness under long-term drought stress in tobacco. *Journal of Plant Physiology*, *281*(1): 1-18. https://doi.org/10.1016/j.jplph.2023.153920

Kisman, Sumarjan, Hemon, A. F., Dewi, S. M., Susilowati, L. E., & Gunawan, B. W. 2022. Changes in the anatomical characters of root and stem of three large-seeded soybean (*Glycine Max* (L.) Merrill) under drought stress. *IOP Conference Series: Earth and Environmental Science*, *1107*(1): 1-10. https://doi.org/10.1088/1755-1315/1107/1/012031

Kosma, D. K., Bourdenx, B., Bernard, A., Parsons, E. P., Lü, S., Joubès, J., & Jenks, M. A. 2009. The impact of water deficiency on leaf cuticle lipids of arabidopsis. *Plant Physiology*, *151*(4), 1918-1929. https://doi.org/10.1104/pp.109.141911

Kumari, S. 2017. Effects of nitrogen levels on anatomy, growth, and chlorophyll content in sunflower (*Helianthus annuus* L.) leaves. *Journal of Agricultural Science*, 9(8): 208-21 https://doi.org/10.5539/jas.v9n8p208

Kumar, S., Kumar, S., & Mohapatra, T. 2021. Interaction between macro- and micro- nutrients in plants. *Frontiers in Plant Science*, 12(1): 1-9. https://doi.org/10.3389/fpls.2021.665583

Lammerts van Bueren, E. T., & Struik, P. C. 2017. Diverse concepts of breeding for nitrogen use efficiency. A review. *Agronomy for Sustainable Development*, *37*(50): 1-24. https://doi.org/10.1007/s13593-017-0457-3

Leal, M., Moreno, M. A., Albornoz, P. L., Mercado, M. I., Zampini, I. C., & Isla, M. I. 2023. *Nicotiana tabacum* leaf waste: Morphological characterization and chemical-functional analysis of extracts obtained from powder leaves by using green solvents. *Molecules*, *28*(3): 1-16. https://doi.org/10.3390/molecules28031396

Lei, Z. Y., Han, J. M., Yi, X. P., Zhang, W. F., & Zhang, Y. L. 2018. Coordinated variation between veins and stomata in cotton and its relationship with water-use efficiency under drought stress. *Photosynthetica*, *56*(4): 1326-1335. https://doi.org/10.1007/s11099-018-0847-z

Lens, F., Tixier, A., Cochard, H., Sperry, J. S., Jansen, S., & Herbette, S. 2013. Embolism resistance as a key mechanism to understand adaptive plant strategies. *Current Opinion in Plant Biology*, *16*(3), 287-292. https://doi.org/10.1016/j.pbi.2013.02.005

Li, S., Huang, X., Zheng, R., Zhang, M., Zou, Z., Heal, K. V., & Zhou, L. 2024. Xylem plasticity of root, stem, and branch in *Cunninghamia lanceolata* under drought stress: Implications for whole-plant hydraulic integrity. *Frontiers in Plant Science*, *15*(1308360), 1-12. https://doi.org/10.3389/fpls.2024.1308360

Li, Y., Li, H., Li, Y. and Zhang, S. 2017 Improving water-use efficiency by decreasing stomatal conductance and transpiration rate to maintain higher ear photosynthetic rate in drought-resistant wheat. *Crop J.* 5: 231–239. https://doi.org/10.1016/j.cj.2017.01.001

Li, Y., Xin, G., Liu, C., Shi, Q., Yang, F., & Wei, M. 2020. Effects of red and blue light on leaf anatomy, CO2 assimilation and the photosynthetic

electron transport capacity of sweet pepper (*Capsicum annuum* L.) seedlings. *BMC Plant Biology*, *20*(1): 1-16. https://doi.org/10.1186/s12870-020-02523-z

Liu, L., Wang, X., & Chang, C. 2022. Toward a smart skin: Harnessing cuticle biosynthesis for crop adaptation to drought, salinity, temperature, and ultraviolet stress. *Frontiers in Plant Science*, *13*(1): 1-13. https://doi.org/10.3389/fpls.2022.961829

Liu, P., Li, X., Hu, S., He, W., Zhou, Y., & Wang, Y. 2024. Effects of nitrogen forms on root morphology and nitrogen accumulation in *Pinus tabuliformis* Carr. Seedlings under exponential fertilization. *Forests*, *15*(2): 1-14. https://doi.org/10.3390/f15020271

Liu, T., Ren, T., White, P. J., Cong, R., & Lu, J. 2018. Storage nitrogen Co-ordinates leaf expansion and photosynthetic capacity in winter oilseed rape. *Journal of Experimental Botany*, *69*(12): 2995-3007. https://doi.org /10.1093/jxb/ery134

Liu, X., Liang, D., Song, W., Wang, X., Duan, W., Wang, C., & Wang, P. 2023. Tobacco roots increasing diameter and secondary lateral density in response to drought stress. *Plant Physiology and Biochemistry*, *204*: 1-9. https://doi.org /10.1016/j.plaphy.2023.108122

Lisuma, J. B., Mbega, E. R., & Ndakidemi, P. A. 2019. Dynamics of nicotine across the soil–tobacco plant interface is dependent on agro-ecology, nitrogen source, and rooting depth. *Rhizosphere*, *12*(1): 1-7. https://doi.org/10.1016/j.rhisph.2019.100175

Lutfiah, I., Sulistyawati, & Pratiwi2, S. H. (2021). Pengaruh Dosis Nitrogen Terhadap Pertumbuhan Dan Hasil Tanaman Terong Ungu (Solanum melongena L. var. Hibrida F1 Antaboga). *Jurnal Agroteknologi Merdeka Pasuruan*, *5*(1), 1-6. https://jamp-jurnal.unmerpas.ac.id/index.php/jamppertanian/article/view/51

Mansoor, U., Fatima, S., Hameed, M., Naseer, M., Ahmad, M. S., Ashraf, M., Ahmad, F., & Waseem, M. 2019. Structural modifications for drought tolerance in stem and leaves of *Cenchrus ciliaris* L. ecotypes from the Cholistan desert. *Flora*, *261*: 1-34. https://doi.org/10.1016/j.flora.2019.151485

Marphy, T. M., Priminingtyas, D. N., Ekonomi, J. S., Pertanian, F., Brawijaya, U., & Veteran, J. 2019. Analisis Faktor-Faktor yang Mempengaruhi Tingkat Partisipasi Petani Dalam Program Asuransi Usahatani Padi (AUTP) di Desa Watugede , Kecamatan Singosari , Kabupaten Malang. *HABITAT*, 30(2): 62–70. https://doi.org/10.21776/ub.habitat.2019.030.2.8

Martin, L. B., Romero, P., Fich, E. A., Domozych, D. S., & Rose, J. K. 2017. Cuticle biosynthesis in tomato leaves is developmentally regulated by Abscisic acid. *Plant Physiology*, *174*(3): 1384-1398. https://doi.org/10.1104/pp.17.00387

Maulana, I. F., Sudaryatno, S., & Jatmiko, R. H. 2021. Identifikasi sebaran kerentanan kekeringan pertanian menggunakan analytical hierarchy process (Ahp) Di kabupaten temanggung. *Jurnal Teknosains*, *10*(2): 125-140. https://doi.org/10.22146/teknosains.54003

Mastur. 2016. Respon Fisiologis Tanaman Tebu Terhadap Kekeringan. *Buletin Tanaman Tembakau, Serat & Minyak Industri*, *8*(2): 98-111.

https://doi.org/10.21082/btsm.v8n2.2016.99-112

Meng, F., Zhang, T., & Yin, D. 2023. The effects of soil drought stress on growth characteristics, root system, and tissue anatomy of *Pinus sylvestris* Var. *mongolic*a. PeerJ, 11(1): 1-10. https://doi.org/10.7717/peerj.14578

Mudhor, M. A., Dewanti, P., Handoyo, T., & Ratnasari, T. 2022. Pengaruh Cekaman Kekeringan Terhadap Pertumbuhan Dan Produksi Tanaman Padi Hitam Varietas Jeliteng. *Jurnal Agrikultura*, 33(3): 247-256. https://doi.org/10.24198/agrikultura.v33i3.40361

Muktianto, R. T., & Diartho, H. C. 2018. Komoditas Tembakau Besuki Na-oogst dalam Perspektif Pembangunan Berkelanjutan Di Kabupaten Jember. Caraka Tani: Journal of Sustainable Agriculture, 33(2): 115-125. https://doi.org/10.20961/carakatani.v33i2.20598

Muller, O., Oguchi, R., Hirose, T., Werger, M. J., & Hikosaka, K. 2009. The leaf anatomy of a broad-leaved Evergreen allows an increase in leaf nitrogen content in winter. *Physiologia Plantarum*, *136*(3): 299-309. https://doi.org/10.1111/j.1399-3054.2009.01224.x

Mu, X. H., & Chen, Y. L. 2020. The physiological response of photosynthesis to nitrogen deficiency. *Plant Physiology and Biochemistry*, *1*(1): 1-22. https://doi.org/10.1016/j.plaphy.2020.11.019

Nurhidayati, T., Purnobasuki, H., & Hariyanto, S. 2019. *Tanaman Tembakau Pada Cekaman Genangan*. Deepublish. Yogyakarta. https://www.google.co.id/books/edition/Tanaman_Tembakau_Pada_Cekaman_Genangan/6lhYEQAAQBAJ?hl=id&gbpv=1&dq=Tanaman+Tembakau+Pada+Cekaman+Genangan&pg=PA139&printsec=frontcover

Nasab, H. M., Siadat, S. A., Naderi, A., Lack, S., & Modhej, A. 2014. The Effects of Drought Stress and Nitrogen Levels on Yield, Stomatal Conductance and Temperature Stability of Rapeseed (Canola) Genotypes. *Advances in Environmental Biology,*, *8*(10): 1239-1247. https://www.researchgate.net/publication/265289930_The_Effects_of_Drought_Stress_and_Nitrogen_Levels_on_Yield_Stomatal_Conductance_and_Temperature_Stability_of_Rapeseed_Canola_Genotypes

Nurwiyati, R. T., & Yuwanto. 2017. Peran Asosiasi Petani Tembakau Indonesia (APTI) Dalam Memperjuangkan Kepentingan Petani Tembakau Di Kabupaten Temanggung. *Jurnal Ilmu Pemerintahan*, *1*(1): 1-10. https://ejournal3.undip.ac.id/index.php/jpgs/article/view/17644

Noviarini, W., & Ermavitalini, D. 2015. Analisa Kerusakan Jaringan Akar Lamun Thalassia hemprichii yang Terpapar Logam Berat Kadmium (Cd). *Jurnal Sains Dan Seni ITS*, 4(2): 2337-3520. https://doi.org/10.12962/j23373520.v4i2.13545

O'Brien, J., Vega, A., Bouguyon, E., Krouk, G., Gojon, A., Coruzzi, G., & Gutiérrez, R. 2016. Nitrate transport, sensing, and responses in plants. *Molecular Plant*, *9*(6): 837-856. https://doi.org/10.1016/j.molp.2016.05.004

Pandey, P., Irulappan, V., Bagavathiannan, M. V., & Senthil-Kumar, M. 2017. Impact of combined abiotic and biotic stresses on plant growth and avenues for crop improvement by exploiting physio-morphological traits. *Frontiers in Plant Science*, 8(537): 1-15. https://doi.org/10.3389/fpls.2017.00537

Patmi, Y. S., Pitoyo, A., Solichatun, & Sutarno. 2020. Effect of drought stress on

morphological, anatomical, and physiological characteristics of Cempo Ireng cultivar mutant rice (*Oryza sativa* L.) strain 51 irradiated by gamma-ray. *Journal of Physics: Conference Series*, *1436*(1), 1-9. https://doi.org/10.1088/1742-6596/1436/1/012015

Pélissier, P., Motte, H., & Beeckman, T. 2021. Lateral root formation and nutrients: Nitrogen in the spotlight. *Plant Physiology*, *187*(3), 1104-1116. https://doi.org/10.1093/plphys/kiab145

Prasetiyo, A., Djajadi, & Sudarto. 2016. Kajian Produktivitas Dan Mutu Tembakau Temanggung Berdasarkan Nilai Indeks Erodibilitas Dan Kepadatan Tanah. *Jurnal Tanah dan Sumberdaya Lahan*, 3(2): 389-399. https://jtsl.ub.ac.id/index.php/jtsl/article/view/153

Pratiwi, A., & Nafira, A. F. 2021. Pengaruh Frekuensi Penyiraman Terhadap Pertumbuhan Buncis (*Phaseolus vulgaris* L.). *Konservasi Hayati*, 17(2): 75-84. https://ejournal.unib.ac.id/hayati/article/view/15034/8737

Priatama, R. A., Heo, J., Kim, S. H., Rajendran, S., Yoon, S., Jeong, D., Choo, Y., Bae, J. H., Kim, C. M., Lee, Y. H., Demura, T., Lee, Y. K., Choi, E., Han, C., & Park, S. J. 2022. Narrow lpa1 Metaxylems enhance drought tolerance and optimize water use for grain filling in dwarf rice. *Frontiers in Plant Science*, *13*, 1-15. https://doi.org/10.3389/fpls.2022.894545

Purnamasari, I., Wahyu Saputra, T., & Ristiyana, S. 2021. Pola Spasial Kekeringan di Jawa Barat Pada Kondisi El Nino Berbasis Metode Palmer Drought Severity Index (PDSI). *Jurnal Teknik Pengairan*, 12(1): 16–29. https://doi.org/10.21776/ub.pengairan.2021.012.01.02

Purnobasuki, H., Nurhidayati, T., Hariyanto, S., & Jadid, N. 2018. Data of root anatomical responses to periodic waterlogging stress of tobacco (*Nicotiana tabacum*) varieties. *Data in Brief*, 20: 2012-2016. https://doi.org/10.1016/j.dib.2018.09.046

Qinglin, L., Hanping, M., Xiaoya, D., Jing, Z., & Zhiyu, Z. 2014. The effects of nitrogen on micro-structure of tomato leaf. *ASABE Annual International Meeting*, *1*(1): 1-7. ttps://doi.org/10.13031/aim.20141912263

Purushothaman, R., Zaman-Allah, M., Mallikarjuna, N., Pannirselvam, R., Krishnamurthy, L., & Gowda, C. L. (2013). Root anatomical traits and their possible contribution to drought tolerance in grain legumes. Plant Production Science, 16(1), 1-8. https://doi.org/10.1626/pps.16.1

Putra, H. T. F., Muhaimin, A. W., & Suhartini. 2015. The competitiveness analysis of Indonesia's tobacco in the international market. *Habitat*, 26(1): 57-60. https://www.researchgate.net/publication/314157846_ANALYSIS_OF_THE_COMPETITIVENESS_OF_TOBACCO_INDONESIA_IN_THE_INTERNATIONAL_MARKET/fulltext/58b8be2d45851591c5d8067f/ANALYSIS-OF-THE-COMPETITIVENESS-OF-TOBACCO-INDONESIA-IN-THE-INTERNATIONAL-MARKET.pdf

Rachmat, M dan S, Nuryanti. 2009. Dinamika agribisnis tembakau dunia dan implikasinya bagi Indonesia. *Forum Penelitian Agro Ekonomi*. 27(2):73-91. https://media.neliti.com/media/publications/69348-ID-dinamika-agribisnis-tembakau-dunia-dan-i.pdf

Rahayu, N. D., Sasmito, B., & Bashit, N. 2018. Analisis Pengaruh Fenomena Indian Ocean Dipole (IOD) Terhadap Curah Hujan Di Pulau Jawa. *Jurnal*

Geodesi Undip, 7(1): 57-67. https://doi.org/10.14710/jgundip.2017.19299

Rathgeber, C. B., Cuny, H. E., & Fonti, P. 2016. Biological basis of tree-ring formation: A crash course. *Frontiers in Plant Science*, *7*: 1-7. https://doi.org/10.3389/fpls.2016.00734

Renaldi, V. P., Bakhtiar, A., & Mufriantie, F. 2022. Motivasi Petani Dalam Usahatani Tembakau Di Desa Bulangan Barat Kecamatan Pegantenan Kabupaten Pamekasan. *Jurnal Kirana*, 3(2): 97-106. https://doi.org/10.19184/jkrn.v3i2.33445

Renström, A., Choudhary, S., Gandla, M. L., Jönsson, L. J., Hedenström, M., Jämtgård, S., & Tuominen, H. 2024. The effect of nitrogen source and levels on hybrid Aspen tree physiology and wood formation. *Physiologia Plantarum*, *176*(1): 1-15. https://doi.org/10.1111/ppl.14219

Rifai, A. K., & Puspitawati, R. P. 2021. Respon Morfologi, Anatomi Dan Fisiologi Daun Kersen (*Muntingia calabura*) Akibat Paparan timbal PB Yang Berbeda Di Surabaya. *LenteraBio : Berkala Ilmiah Biologi*, 11(1): 8-14. https://doi.org/10.26740/lenterabio.v11n1.p8-14

Rizal, S. 2017. Pengaruh Nutriasi Yang Diberikan Terhadap Pertumbuhan Tanaman Sawi Pakcoy (*Brassica rapa* L.) Yang Ditanam Secara Hidroponik. *Sainmatika*, *14*(1): 38-44. https://doi.org/10.31851/sainmatika.v14i1.1112

Rolanda, I. A., Arifin, A. Z., & Sulistyawati1. 2021. Pengaruh Pemberian Dosis Pupuk Nitrogen Terhadap Pertumbuhan Dan Hasil Tanaman Sawi Pahit (*Brassica juncea* L.). *Jurnal Agroteknologi Merdeka Pasuruan*, *5*(2): 1-6. https://jamp-jurnal.unmerpas.ac.id/index.php/jamppertanian/article/view/64

Rosanti, D., Kartika, T., & Jannah, M. 2023. Struktur stomata Pada Familia Poaceae Di Desa Kota Bumi Kecamatan Tanjung Lubuk Kabupaten OKI. *Indobiosains*, *5*(1): 25-32. https://doi.org/10.31851/indobiosains.v5i1.10980

Trisiswanti dan Sugimin. 2020. Efektivitas Teknik Clearing Daun untuk Pengamatan Karakteristik Mikromarfologi. *Indonesian Journal of Laboratory*, 2(3): 47-53. https://doi.org/10.22146/ijl.v2i3.58498

Samsuri, T. 2013. Pengaruh Berbagai Intensitas Cahaya Terhadap Perubahan Struktur Anatomi Daun Tanaman Gaharu (*Gyrinops versteegii* (Gilg.) Domke). *Jurnal Ilmiah Biologi "Bioscientist"* , *1*(1), 1-13. https://e-journal.undikma.ac.id/index.php/bioscientist/article/view/3547/0

Sam, O., Jeréz, E., Dell'Amico, J., & Ruiz-Sanchez, M. 2000. Water stress induced changes in anatomy of tomato leaf Epidermes. *Biologia plantarum*, *43*(2), 275-277. https://doi.org/10.1023/a:100271662980

Santoso, A. D., & Purnomo, P. 2021. Variation and phenetic relationship of tobacco (*Nicotiana tabacum* L.) in Central Java and Yogyakarta based on morphological characters. *Jurnal Riset Biologi dan Aplikasinya*, *3*(2): 73-79 https://doi.org/10.26740/jrba.v3n2.p73-79

Sapala, A., Runions, A., & Smith, R. S. 2019. Mechanics, geometry and genetics of epidermal cell shape regulation: Different pieces of the same puzzle. *Current Opinion in Plant Biology*, *47*, 1-8 https://doi.org/10.1016/j.pbi.2018.07.017

Sari, A. J., Sari, T., Sulistiono, Rahmawati, I., & Cintamulya, I. 2022. Tipe Stomata Daun pada Tanaman Peneduh Dominan di Taman Kota

Kediri. *Seminar Nasional Sains, Kesehatan, dan Pembelajaran*, *1*(1): 442-446. https://doi.org/10.29407/seinkesjar.v2i1.3056.

Sathee, L., & Jain, V. 2021. Interaction of elevated CO_2 and form of nitrogen nutrition alters leaf abaxial and adaxial epidermal and stomatal anatomy of wheat seedlings. *Protoplasma*, *259*(3), 703-716. https://doi.org/10.1007/s00709-021-01692-4

Shahzad, M., Khan, Z., Nazeer, W., Arshad, S. F., & Ahmad, F. 2021. Effect of drought on trichome density and length in cotton (*Gossypium Hirsutum*). *Journal of Bioresource Management*, *8*(1), 154-167. https://doi.org/10.35691/JBM.1202.0174

Shoaib, M., Banerjee, B. P., Hayden, M., & Kant, S. 2022. Roots' drought adaptive traits in crop improvement. *Plants*, *11*(17), 1-20. https://doi.org/10.3390/plants11172256

Saud, S., Fahad, S., Yajun, C., Ihsan, M. Z., Hammad, H. M., Nasim, W., Amanullah, Arif, M., & Alharby, H. 2017. Effects of nitrogen supply on water stress and recovery mechanisms in Kentucky bluegrass plants. *Frontiers in Plant Science*, 8(983): 1-18. https://doi.org/10.3389/fpls.2017.00983

Semida, W. M., Abdelkhalik, A., Mohamed, Gamal. F., Abd El-Mageed, T. A., Abd El-Mageed, S. A., Rady, M. M., & Ali, E. F. 2021. Foliar application of zinc oxide nanoparticles promotes drought stress tolerance in eggplant (*Solanum melongena* L.). *Plants*, *10*(2): 421. https://doi.org/10.3390/plants10020421

Shavrukov, Y., Kurishbayev, A., Jatayev, S., Shvidchenko, V., Zotova, L., Koekemoer, F., De Groot, S., Soole, K., & Langridge, P. 2017. Early flowering as a drought escape mechanism in plants: How can it aid wheat production? *Frontiers in Plant Science*, 8(1950): 1-8. https://doi.org/10.3389/fpls.2017.01950

Song, J., Wang, Y., Pan, Y., Pang, J., Zhang, X., Fan, J., & Zhang, Y. 2019. The influence of nitrogen availability on anatomical and physiological responses of *Populus alba* × *P. glandulosa* to drought stress. *BMC Plant Biology*, 19(1): 1-12 https://doi.org/10.1186/s12870-019-1667-4

Tamara, Munte, R. A., Nanda, A. A., & Tanjung4, I. F. 2023. Keanekaragaman Vegetasi Tumbuhan Gymnospermae Di Komplek Vetpur Medan estate. *Jurnal Ilmiah Biosaintropis (Bioscience-Tropic)*, *9*(1): 45-51 https://doi.org/10.33474/e-jbst.v9i1.522

Uzelac, B., Stojičić, D., & Budimir, S. 2019. Glandular Trichomes on the Leaves of *Nicotiana tabacum*: Morphology, Developmental Ultrastructure, and Secondary Metabolites. Plant Cell and Tissue Differentiation and Secondary Metabolites. *Springer*, 1–37. https://doi.org/10.1007/978-3-030-30185-9_1

Voothuluru, P., Wu, Y., & Sharp, R. E. 2024. Not so hidden anymore: Advances and challenges in understanding root growth under water deficits. *The Plant Cell*, *36*(5): 1377-1409 https://doi.org/10.1093/plcell/koae150

Wang, S., Mo, X., Hu, S., Liu, S., & Liu, Z. 2018. Assessment Of Droughts And Wheat Yield Loss On The North China Plain With An Aggregate Drought Index (ADI) Approach. *Ecological Indicators*, 87: 107–116 https://doi.org/10.1016/j.ecolind.2017.12.047

Wang, X., Shen, C., Meng, P., Tan, G., & Lv, L. 2021. Analysis and review of

trichomes in plants. *BMC Plant Biology*, *21*(70): 1-11. https://doi.org/10.1186/s12870-021-02840-x

Watts, S., & Kariyat, R. 2021. Picking sides: Feeding on the abaxial leaf surface is costly for caterpillars. *Planta*, *253*(7), 1-6. https://doi.org/10.1007/s00425-021-03592-6

Xin, H., Li, Q., Wang, S., Zhang, Z., Wu, X., Liu, R., Zhu, J., & Li, J. 2023. *Saussurea involucrata* PIP2;4 improves growth and drought tolerance in *Nicotiana tabacum* by increasing stomatal density and sensitivity. *Plant Science*, *326*, 1-10. https://doi.org/10.1016/j.plantsci.2022.111526

Yang, X., Lu, M., Wang, Y., Wang, Y., Liu, Z., & Chen, S. 2021. Response mechanism of plants to drought stress. *Horticulturae*, 7(50): 1-36. https://doi.org/10.3390/horticulturae7030050

Yan, A., Pan, J., An, L., Gan, Y., and Feng, H. (2012) The responses of trichome mutants to enhanced ultraviolet-B radiation *in Arabidopsis thaliana*. *J. Photochem Photobiol B Biol*,113: 29–35. https://doi.org/10.1016/j.jphotobiol.2012.04.011

Yavas, I, M.A. Jamal, K.U. Din. 2024. Drought-induced changes in leaf morphology and anatomy: overview, implications and perspectives. *Pol. J. Environ Stud*. 33: 1517–1530. https://doi.org/10.15244/pjoes/174476

Zagoto, A. D., & Violita, V. 2019. Leaf anatomical modification in drought of rice varieties (*Oryza sativa* L.). *Eksakta : Berkala Ilmiah Bidang MIPA*, 20(2): 42-52. https://doi.org/10.24036/eksakta/vol20-iss2/201

Zakariyya, F., Indradewa, D., & Santoso, T. I. 2019. Changes of leaf anatomical profile of cocoa clones seedlings in response to drought. *Pelita Perkebunan (a Coffee and Cocoa Research Journal)*, *35*(3): 177-185. https://doi.org/10.22302/iccri.jur.pelitaperkebunan.v35i3.390

Zekri, M. A., Leimhofer, C., Drexler, N., & Lang, I. 2024. A rapid freezing method to determine tissue layer thickness in drought-stressed leaves. *Journal of Microscopy*, *297*(3), 316-324 https://doi.org/10.1111/jmi.13272

Zenkner, F. F., Margis-Pinheiro, M., & Cagliari, A. 2019. Nicotine biosynthesis in *Nicotiana*: A metabolic overview. *Tobacco Science*, 56(1): 1-9. https://doi.org/10.3381/18-063

Zhan, A., Schneider, H., & Lynch, J. P. 2015. Reduced lateral root branching density improves drought tolerance in maize. *Plant Physiology*, *168*(4), 1603-1615. https://doi.org/10.1104/pp.15.00187

Zhang, H., Khan, A., Tan, D. K., & Luo, H. 2017. Rational water and nitrogen management improves root growth, increases yield and maintains water use efficiency of cotton under mulch drip irrigation. *Frontiers in Plant Science*, *8*, 1-10. https://doi.org/10.3389/fpls.2017.00912

Zhang, R., Wang, Y., Wang, X., Jiao, S., Lu, Y., Du, Y., Zhang, W., Kang, Y., Liu, Y., & Qin, S. 2025. Differential responses of microstructure, antioxidant defense, and plant hormone signaling regulation in potato (*Solanum tuberosum* L.) under drought, alkaline salt, and combined stresses. *Scientia Horticulturae*, *341*(1), 1-14. https://doi.org/10.3389/fpls.2017.00912

Zhao, P., Li, Q., Lei, Y., Zou, J., & Li, Q. (2025). Adaptation of cuticle metabolism to abiotic stress in plants. *Crop and Environment*, *4*(1), 38-44.

https://doi.org/10.1016/j.crope.2025.01.001

Zhu, L., Liu, L., Sun, H., Zhang, K., Zhang, Y., Li, A., Bai, Z., Wang, G., Liu, X., Dong, H., & Li, C. 2022. Low nitrogen supply inhibits root growth but prolongs lateral root lifespan in cotton. *Industrial Crops and Products*, *189*(115733), 1-13. https://doi.org/10.1016/j.indcrop.2022.115733

Zhu, J. K. 2016. Abiotic Stress Signaling and Responses in Plants. *Cell*, *167*, 313-324. https://doi.org/10.1016/j.cell.2016.08.029

Zuch, D. T., Doyle, S. M., Majda, M., Smith, R. S., Robert, S., & Torii, K. U. 2021. Cell biology of the leaf epidermis: Fate specification, morphogenesis, and coordination. *The Plant Cell*, *34*(1), 209-227 https://doi.org/10.1093/plcell/koab250