

IX. DAFTAR PUSTAKA

- Acheampoong, K., P. Hadley, dan A. J. Daymond. 2013. Photosynthetic Activity & Early Growth of Four Cacao Genotypes as Influenced by Different Shade Regimes Under west African Dry and Wet Season Conditions. *Experimental Agriculture*, 49 (1), 31-42.
- Adet, L., Rozendaal, D. M. A., Tapi, A., Zuidema, P. A., Vaast, P., & Anten, N. P. R. (2024). Negative effects of water deficit on cocoa tree yield are partially mitigated by irrigation and potassium application. *Agricultural Water Management*, 296. <https://doi.org/10.1016/j.agwat.2024.108789>
- Adet, L., Rozendaal, D. M. A., Zuidema, P. A., Vaast, P., & Anten, N. P. R. (2024). Cocoa tree performance and yield are affected by seasonal rainfall reduction. *Agricultural Water Management*, 302. <https://doi.org/10.1016/j.agwat.2024.108995>
- Adhikari, P. B., Xu, Q., & Notaguchi, M. (2022). Compatible Graft Establishment in Fruit Trees and Its Potential Markers. *Agronomy* (Vol. 12, Issue 8). MDPI. <https://doi.org/10.3390/agronomy12081981>
- Akram, N. A., Shafiq, F., & Ashraf, M. (2017). Ascorbic acid-a potential oxidant scavenger and its role in plant development and abiotic stress tolerance. *Frontiers in Plant Science* (Vol. 8). Frontiers Research Foundation. <https://doi.org/10.3389/fpls.2017.00613>
- Amoah, F. M. (2006). Review of vegetative propagation of cacao (*Theobroma cacao* L.) by rooted cuttings: environmental and technical considerations. *Ghana Journal of Agricultural Science* (Vol. 39).
- Anita Sari, I., & Susilo, A. W. (2012). Keberhasilan sambungan pada beberapa jenis batang atas dan famili batang bawah kakao (*Theobroma cacao* L.). *Pelita Perkebunan*, 28(2), 71–81.
- Anita-Sari, I., Soesilo, A. W., & Mawardi, S. (2015). *Seleksi dan Pemuliaan Kakao in T. Wahyudi, Misnawi, Pujiyanto (Eds), Kakao Sejarah, Botani, Proses Produksi, Pengolahan dan Perdagangan. 1st Ed. Gadjah Mada University Press, Yogyakarta.*
- Aryal, S., Baniya, M. K., Danekhu, K., Kunwar, P., Gurung, R., & Koirala, N. (2019). Total Phenolic content, Flavonoid content and antioxidant potential of wild vegetables from western Nepal. *Plants*, 8(4). <https://doi.org/10.3390/plants8040096>

- Asman, A., Iwanami, T., & Rosmana, A. (2024). Effect of drought stress on dieback disease development under *Lasiodiplodia theobromae* infection in cocoa clone "MCC 02." *Beverage Plant Research*, 0(0), 1–12. <https://doi.org/10.48130/bpr-0024-0023>
- Babenko, L. M., Smirnov, O. E., Romanenko, K. O., Trunova, O. K., & Kosakivska, I. V. (2019). Phenolic compounds in plants: Biogenesis and functions. *Ukrainian Biochemical Journal*, Vol. 91, Issue 3, pp. 5–18). <https://doi.org/10.15407/ubj91.03.005>
- Barton, K. E. (2024). The ontogenetic dimension of plant functional ecology. *Functional Ecology*, 38: 98-113DOI: 10.1111/1365-2435.14464
- BMKG. (2022). *Indonesian Climate Outlook 2023*. Badan Meteorologi, Klimatologi dan Geofisika, Jakarta, Indonesia.
- BMKG. (2023). *Indonesian Climate Outlook 2024*. Badan Meteorologi, Klimatologi dan Geofisika, Jakarta, Indonesia.
- BPS. (2023). Statistik Kakao Indonesia Tahun 2022. *Badan Pusat Statistik, Volume 7, Jakarta, Indonesia*.
- BSN. (2008). Standar Nasional Indonesia: Biji Kakao. *Badan Standardisasi Nasional, Jakarta, Indonesia*. Available at SNI 2323_2008 Biji kakao - acanis1016 | PDF Online | FlipHTML5.
- Cao, Y., Zhong, Z., Wang, H., & Shen, R. (2022). Leaf angle: a target of genetic improvement in cereal crops tailored for high-density planting. *Plant Biotechnology Journal*, Vol. 20, Issue 3, pp. 426–436). <https://doi.org/10.1111/pbi.13780>
- Cahyo, A. N., Murti, R. H., Putra, E. T. S., Oktavia, F., Ismawanto, S., & Montoro, P. (2022). Rubber Genotypes with Contrasting Drought Factor Index Revealed Different Mechanisms for Drought Resistance in *Hevea brasiliensis*. *Plants*, 11(24). <https://doi.org/10.3390/plants11243563>
- Carr, M. K. V., dan G. Lockwoods. 2011. The Water Relations and Irrigation Requirements of Cocoa (*Theobroma cacao* L.): A Review. *Explanation Agriculture*, 47(4), 653-676.
- Chun, H. C., Lee, S., Choi, Y. D., Gong, D. H., & Jung, K. Y. (2021). Effects of drought stress on root morphology and spatial distribution of soybean and adzuki bean. *Journal of Integrative Agriculture*, 20(10), 2639–2651. [https://doi.org/10.1016/S2095-3119\(20\)63560-2](https://doi.org/10.1016/S2095-3119(20)63560-2)

- Daymond, A. J., Prawoto, A., Abdoellah, S., Susilo, A. W., Cryer, N. C., Lahive, F., & Hadley, P. (2020). Variation in Indonesian cocoa farm productivity in relation to management, environmental and edaphic factors. *Experimental Agriculture*, Vol. 56, Issue 5, pp. 738–751. <https://doi.org/10.1017/S0014479720000289>
- de Vries, J., Evers, J. B., Kuyper, T. W., van Ruijven, J., & Mommer, L. (2021). Mycorrhizal associations change root functionality: a 3D modelling study on competitive interactions between plants for light and nutrients. *New Phytologist*, 231(3), 1171–1182. <https://doi.org/10.1111/nph.17435>
- Dobrev, P. I., Hoyerová, K., & Petrášek, J. (2017). Analytical determination of auxins and cytokinins. In *Methods in Molecular Biology* (Vol. 1569, pp. 31–39). https://doi.org/10.1007/978-1-4939-6831-2_2
- Dzandu, E., Enu-Kwesi, L., Markwei, C. M., & Ayeh, K. O. (2021). Screening for drought tolerance potential of nine cocoa (*Theobroma cacao* L.) genotypes from Ghana. *Heliyon*, 7(11). <https://doi.org/10.1016/j.heliyon.2021.e08389>
- Gateau-Rey, L., Tanner, E. V. J., Rapidel, B., Marelli, J. P., & Royaert, S. (2018). Climate change could threaten cocoa production: Effects of 2015-16 El Niño-related drought on cocoa agroforests in Bahia, Brazil. *PLoS ONE*, 13(7). <https://doi.org/10.1371/journal.pone.0200454>
- Ghimire, B. K., Kim, S. H., Yu, C. Y., & Chung, I. M. (2022). Biochemical and Physiological Changes during Early Adventitious Root Formation in *Chrysanthemum indicum* Linné Cuttings. *Plants*, 11(11). <https://doi.org/10.3390/plants11111440>
- Goldschmidt, E. E. (2014). Planting grafting: new mechanisms, evolutionary implications. *Frontiers in Plant Sciences*. <https://doi.org/10.3389/fpls.2014.00727>
- Gomes, A. R. S., Sodre, G. A., Guiltinan, M., Lockwood, R., & Maximova, S. (2015). *Supplying new cocoa planting material to farmers: A review of propagation methodologies* (B. Laliberte & M. End, Eds.). www.bioversityinternational.org.
- Haghpahan, M., Hashemipetroudi, S., Arzani, A., & Araniti, F. 2024. Drought Tolerance in Plants: Physiological and Molecular Responses. *Plants*, 13, 2962. <https://doi.org/10.3390/plants13212962>
- Hartmann, H. T., Kester, D. E., Davies, F. T., Jr., & Geneve, R. L. (2011). *Hartmann and Kester's Plant Propagation: Principles and Practices* (8th ed.). Prentice Hall / Pearson Education.
- Jaimez, R., Loor, R., Arteaga, F., Márquez, V., & Tezara, W. (2021). Differential response of photosynthetic activity, leaf nutrient content and yield to long-term

- drought in cacao clones. *Acta Agronomica*, 70(3).
<https://doi.org/10.15446/acag.v70n3.92252>
- Kementerian Pertanian. (2017). *Keputusan menteri pertanian RI nomor 25/Kpts/KB/020/5/2017 tentang pedoman produksi, serifikasi, peredaram dan pengawan benih tanaman kakao (Theobroma cacao L). Kementerian Pertanian Republik Indonesia.*
- Kummerow, J., M. Kummerow, dan W. S. Da Silva. 1982. Fine Root Growth Dynamics in Cacao (*Theobroma cacao* L.). *Plant Soil*, 65, 193-201.
- Lahive, F., Hadley, P., & Daymond, A. J. (2019). The physiological responses of cacao to the environment and the implications for climate change resilience. A review. In *Agronomy for Sustainable Development* (Vol. 39, Issue 1). Springer-Verlag France. <https://doi.org/10.1007/s13593-018-0552-0>
- Lamba, K., Kumar, M., Singh, V., Chaudhary, L., Sharma, R., Yashveer, S., & Dalal, M. S. (2023). Heat stress tolerance indices for identification of the heat tolerant wheat genotypes. *Scientific Reports*, 13(1). <https://doi.org/10.1038/s41598-023-37634-8>
- Lubis, N., Sofiyani, S., & Junaedi, E. C. (2022). Penentuan Kualitas Madu Ditinjau dari Kadar Sukrosa dengan Metode Luff Schoorl. *Jurnal Sains Dan Kesehatan*, 4(3), 290–297. <https://doi.org/10.25026/jsk.v4i3.1050>
- Maghfiroh, C. N., & Putra, E. T. S. (2020). Morphological characters of root and yield of three cocoa (*Theobroma cacao* L.) clones in the field with dead-end trench. *Agricultural Science*, 5(2), 58. <https://doi.org/10.22146/ipas.51284>
- Maghfiroh, C. N., Putra, E. T. S., & Dewi, HS. E. S. (2020). Root detection by resistivity imaging and physiological activity with the dead-end trench on three clones of cocoa (*Theobroma cacao*). *Biodiversitas*, 21(6), 2794–2803. <https://doi.org/10.13057/biodiv/d210656>
- Malecka, A., Kutrowska, A., Piechalak, A., & Tomaszewska, B. (2015). High peroxide level may be a characteristic trait of a hyperaccumulator. *Water, Air, and Soil Pollution*, 226(4). <https://doi.org/10.1007/s11270-015-2347-0>
- Mendieta, K. A., Burleigh, J. G., & Putz, F. E. (2021). Pith width, leaf size, and twig thickness. *American Journal of Botany*, 108(11), 2143–2149. <https://doi.org/10.1002/ajb2.1800>
- Menezes-Blackburn, D., Giles, C., Darch, T., George, T. S., Blackwell, M., Stutter, M., Shand, C., Lumsdon, D., Cooper, P., Wendler, R., Brown, L., Almeida, D. S., Wearing, C., Zhang, H., & Haygarth, P. M. (2018). Opportunities for mobilizing

- recalcitrant phosphorus from agricultural soils: a review. *Plant and Soil* (Vol. 427, Issues 1–2, pp. 5–16). Springer International Publishing. <https://doi.org/10.1007/s11104-017-3362-2>
- Mensah, E. O., Ræbild, A., Asare, R., Amoatey, C. A., Markussen, B., Owusu, K., Asitoakor, B. K., & Vaast, P. (2023). Combined effects of shade and drought on physiology, growth, and yield of mature cocoa trees. *Science of the Total Environment*, 899. <https://doi.org/10.1016/j.scitotenv.2023.165657>
- Miller, C.R & M.J. Gultinan. 2003. Perspective on rapid vegetative multiplication for orthotropic scion and rootstock varieties of cocoa. Proceedings of International Workshop on Cocoa Breeding for Improved Production System. 189-194.
- Miller, C. R. (2009). *An Integrated In Vitro and Greenhouse Orthotropic Clonal Propagation System for Theobroma Cacao L* (Dissertation). Dissertation, The Pennsylvania State University.
- Mithöfer, D., Roshetko, J. M., Donovan, J. A., Nathalie, E., Robiglio, V., Wau, D., Sonwa, D. J., & Blare, T. (2017). Unpacking ‘sustainable’ cocoa: do sustainability standards, development projects and policies address producer concerns in Indonesia, Cameroon and Peru? *International Journal of Biodiversity Science, Ecosystem Services and Management*, 13(1), 444–469. <https://doi.org/10.1080/21513732.2018.1432691>
- Mommer, L. 1999. The Water Relations in Cacao (*Theobroma cacao* L.): Modelling Root Growth and Evapotranspiration. Thesis. Wageningen Agricultural University, Department of Theoretical Production Ecology, Netherlands.
- Niemenak, N., Cilas, C., Rohsius, C., Bleiholder, H., Meier, U., & Lieberei, R. (2010). Phenological growth stages of cacao plants (*Theobroma* sp.): Codification and description according to the BBCH scale. *Annals of Applied Biology*, 156(1), 13–24. <https://doi.org/10.1111/j.1744-7348.2009.00356.x>
- Noah, A. M., Casanova-Sáez, R., Ango, R. E. M., Antoniadi, I., Karady, M., Novák, O., Niemenak, N., & Ljung, K. (2021). Dynamics of auxin and cytokinin metabolism during early root and hypocotyl growth in theobroma cacao. *Plants*, 10(5). <https://doi.org/10.3390/plants10050967>
- Nurwahyuni, E., & Putra, E. T. S. (2019). The Effect of Calcium on Photosynthetic Rate due to ABA and Proline Behaviour of Oil Palm (*Elaeis guineensis* Jacq.) Seedlings under Drought Conditions. *Caraka Tani: Journal of Sustainable Agriculture*, 34(1), 31–42. <https://doi.org/10.20961/carakatani.v34i1.28264>

- N'zi, J. C., Koné, I., M'bo, K. A. A., Koné, S., & Kouamé, C. (2023). Successful grafting elite cocoa clones (*Theobroma cacao* L.) as a function of the age of rootstock. *Heliyon*, 9(8). <https://doi.org/10.1016/j.heliyon.2023.e18732>
- Partelli, F. L., Covre, A. M., Oliveira, M. G., Alexandre, R. S., da Vitória, E. L., & da Silva, M. B. (2014). Root system distribution and yield of “Conilon” coffee propagated by seeds or cuttings. *Pesquisa Agropecuaria Brasileira*, 49(5), 349–355. <https://doi.org/10.1590/S0100-204X2014000500004>
- Pedersen, O., Sauter, M., Colmer, T. D., & Nakazono, M. (2021). Regulation of root adaptive anatomical and morphological traits during low soil oxygen. *New Phytologist*, 229 (1), pp. 42–49. <https://doi.org/10.1111/nph.16375>
- Pour-Aboughadareh, A., Khalili, M., Pocza, P., & Oliveto, T. (2022). Stability Indices to Deciphering the Genotype-by-Environment Interaction (GEI) Effect: An Applicable Review for Use in Plant Breeding Programs. *Plants*, 11 (3). MDPI. <https://doi.org/10.3390/plants11030414>
- PPKKI. (2017). Laporan Akhir Tahun Penjualan Bahan Tanam. Pusat Penelitian Kopi dan Kakao Indonesia.
- Prawoto, A.A. (2004). Pengaruh penyetekan, klon, intensitas penyinaran serta konsentrasi zat pengatur tumbuh terhadap persentase setek kakao berakar. Laporan Penelitian. Pusat Penelitian Kopi dan Kakao Indonesia.
- Qaderi, M. M., Martel, A. B., & Dixon, S. L. (2019). Environmental factors influence plant vascular system and water regulation. *Plants*, 8(3), 65. <https://doi.org/10.3390/plants8030065>
- Rajj-Hoffman, I., Dahan, O., Dahlke, H. E., Harter, T., & Kisekka, I. (2024). Assessing Nitrate Leaching During Drought and Extreme Precipitation: Exploring Deep Vadose-Zone Monitoring, Groundwater Observations, and Field Mass Balance. *Water Resources Research*, 60(11). <https://doi.org/10.1029/2024WR037973>
- Sakiroh, I. Sobari, dan M. Herman. 2015. Teknologi Mengurangi Dampak Perubahan Iklim pada Kakao di Lahan Kering. *Sirinov*, 3 (2), 55 – 66.
- Sanier, C., Oliver, G., Clément-Vidal, A., Fabre, D., Lardet, L., Montoro, P., 2013. Influence of Water Deficit on the Physiological and Biochemical Parameters of in vitro Plants from *Hevea brasiliensis* Clone PB 260. *J. Rubber Res.* 16, 61–74.
- Santos, E. A. D., Almeida, A. A. F. D., Branco, M. C., Santos, I. C. D., Ahnert, D., Baligar, V. C., & Valle, R. R. (2018). Path analysis of phenotypic traits in young cacao plants under drought conditions. *PLoS ONE*, 13(2). <https://doi.org/10.1371/journal.pone.0191847>

- Santos, I. C. D., Almeida, A. A. F. D., Anherth, D., Conceição, A. S. D., Pirovani, C. P., Pires, J. L., Valle, R. R., & Baligar, V. C. (2014). Molecular, physiological and biochemical responses of *Theobroma cacao* L. genotypes to soil water deficit. *PLoS ONE*, 9(12). <https://doi.org/10.1371/journal.pone.0115746>
- Santoso, T. I., & Zakariyya, F. (2022). Field Performance of Plagiotropic Cocoa in Two Clonally Propagation Methods: Vegetative and Early Production Phase. *AIP Conference Proceedings*, 2563. <https://doi.org/10.1063/5.0104501>
- Sasse J., R. Sands. 1996. Comparative responses of cuttings and seedlings of *Eucalyptus globulus* to water stress. *Tree Physiol*, 16, 287–294.
- Schmidt, J. E., DuVal, A., Puig, A., Tempeleu, A., & Crow, T. (2021). Interactive and Dynamic Effects of Rootstock and Rhizobiome on Scion Nutrition in Cacao Seedlings. *Frontiers in Agronomy*, 3. <https://doi.org/10.3389/fagro.2021.754646>
- Schwendenmann, L., E. Veldkamp, G. Moser, H. Dirk, M. Kohler, Y. Cloughs, dan S. Oliver. 2016. Effects of an experimental drought on the functioning of cacao Agroforestry system, Sulawesi, Indonesia. *Global Change Biology*, 16, 1515 – 1530.
- Seigler D. S. 2012. *Plant Secondary Metabolism*. Massachusetts (US) : Kluwer Academic.
- Sodré, G. A., & Gomes, A. R. S. (2019). Cocoa propagation, technologies for production of seedlings. *Revista Brasileira de Fruticultura*, 41(2). <https://doi.org/10.1590/0100-29452019782>
- Song, Z., Wang, L., Lee, M., & Yue, G. H. (2023). The evolution and expression of stomatal regulators in C3 and C4 crops: Implications on the divergent drought tolerance. *Frontiers in Plant Science*, 14. <https://doi.org/10.3389/fpls.2023.1100838>
- Steffens, B., & Rasmussen, A. (2016). The physiology of adventitious roots. *Plant Physiology*, 170(2), 603–617. <https://doi.org/10.1104/pp.15.01360>
- Suchithra, M., Suma, B., Js, M., Mathew, D., & Santhosh, K. A. (2023). Biochemical Response of Cocoa (*Theobroma cacao* L.) Genotypes to Water Deficit Stress Condition. *Environment and Ecology* 41 (2), 824–830. <https://www.researchgate.net/publication/370602096>
- Suchithra, M., Suma, B., Minimol, J. S., Mathew, D., & Kumar, A. V. S. (2022). Physiological response of cocoa (*Theobroma cacao* L.) genotypes to drought. *Journal of Plantation Crops*, 50(3), 136–144. <https://doi.org/10.25081/jpc.2022.v50.i3.8073>

- Supriana, T., Nasution, S., Pane, T. & Hanum, S. (2018). Factors Influencing the Conversion of Cocoa Lands into Oil Palm in Asahan District of North Sumatra In Proceedings of the International Conference of Science, Technology, Engineering, Environmental and Ramification Researches (ICOSTEERR 2018)-Research in Industry 4.0, pages 31-36. DOI: 10.5220/0010079000310036
- Susilo, A. W., Anita-Sari, I., & Setyawan, B. (2020). Yield Performance of Promising Cocoa Clones (*Theobroma cacao* L.) in Dry Climatic Conditions. *Edition Pelita Perkebunan*, 36(1), 24–31.
- Susilo, A. W. (2023). Dukungan Inovasi Teknologi untuk Agribisnis Kakao Berkelanjutan. *ANR Conference Series*, available online at <https://talentaconfseries.usu.ac.id/anr>.
- Syamsiyah, J., Minardi, S., Herdiansyah, G., Cahyono, O., & Mentari, F. C. (2023). Physical Properties of Alfisols, Growth and Products of Hybrid Corn Affected by Organic and Inorganic Fertilizer. *Caraka Tani: Journal of Sustainable Agriculture*, 38(1), 99–112. <https://doi.org/10.20961/carakatani.v38i1.65014>
- Taiz, L., Møller, I., Murphy, A., & Zeiger, E. (2023). *Plant Physiology and Development*. Oxford University Press. Retrieved 19 Oct. 2025, from <https://www.oxfordsciencetrove.com/view/10.1093/hesc/9780197614204.001.0001/isbn-9780197614204>.
- Thomas, D. S. (2009). Survival and growth of drought hardened *Eucalyptus pilularis* Sm. seedlings and vegetative cuttings. *New Forests*, 38(3), 245–259. <https://doi.org/10.1007/s11056-009-9144-9>
- Tomescu, A. M. F. (2021). The stele – a developmental perspective on the diversity and evolution of primary vascular architecture. *Biological Reviews*, 96(4), 1263–1283. <https://doi.org/10.1111/brv.12699>
- Wahyudi, T., Pujiyanto, & Misnawi. (2015). *Kakao: Sejarah, Botani, Proses Produksi, Pengolahan dan Perdagangan*. Gadjah Mada Univesity Press, Yogyakarta, Indonesia.
- Wakeel, A., & Ishfaq, M. (2021). Potash use and dynamics in agriculture. In *Potash Use and Dynamics in Agriculture*. Springer. <https://doi.org/10.1007/978-981-16-6883-8>
- Wood, G. A. R. dan R. A. Lass. 1985. *Cocoa. 4th Edn*. Longman Group, Ltd. London. 620 pp.

- Wuriandani, A., Susilo, A. W., Mitrowiardjo, S., Setyawan, B., & Sari, I. A. (2018). Diversity of pods and beans of twelve cocoa clones (*Theobroma cacao* L.) in rainy and dry seasons. *Edition Pelita Perkebunan*, 34(1), 1–10.
- Xue, Z., Liu, L., & Zhang, C. (2020). Regulation of shoot apical meristem and axillary meristem development in plants. *International Journal of Molecular Sciences*, 21(8). <https://doi.org/10.3390/ijms21082917>
- Yang, Q., Cheng, W., Hao, Z., Zhang, Q., Yang, D., Teng, D., Zhang, Y., Wang, X., Shen, H., & Lei, S. (2022). Study on the Fractal Characteristics of the Plant Root System and Its Relationship with Soil Strength in Tailing Ponds. *Wireless Communications and Mobile Computing*, 2022. <https://doi.org/10.1155/2022/9499465>
- Yang, X., Li, R., Jablonski, A., Stovall, A., Kim, J., Yi, K., Ma, Y., Beverly, D., Phillips, R., Novick, K., Xu, X., & Lerdau, M. (2023). Leaf angle as a leaf and canopy trait: Rejuvenating its role in ecology with new technology. *Ecology Letters*, 26(6), 1005–1020. <https://doi.org/10.1111/ele.14215>
- Zakariyya, F., & Indradewa, D. (2018). Drought Stress Affecting Growth and Some Physiological Characters of Three Cocoa Clones at Seedling Phase. *Edition Pelita Perkebunan*, 34(3), 156–165.
- Zakariyya, F., Setyawan, B., & Wahyu Susilo, A. (2017). Stomatal, Proline, and Leaf Water Status Characters of Some Cocoa Clones (*Theobroma cacao* L.) on Prolonged Dry Season. *Pelita Perkebunan (a Coffee and Cocoa Research Journal)*, 33(2), 109–117. <https://doi.org/10.22302/iccri.jur.pelitaperkebunan.v33i2.264>
- Zambrano, M. A. O., Castillo, D. A., Perez, L. R., & Teran, W. (2021). Cacao (*Theobroma cacao* L.) Response to Water Stress: Physiological Characterization and Antioxidant Gene Expression Profiling in Commercial Clones. *Frontiers in Plant Science*, 12. <https://doi.org/10.3389/fpls.2021.700855>
- Zasari, M., Wachjar, A., Susilo, A. W., & Sudarsono, S. (2020). Prope legitimate rootstocks determine the selection criteria for drought-tolerant cocoa. *Biodiversitas*, 21(9), 4067–4075. <https://doi.org/10.13057/biodiv/d210918>
- Zhang, S., Peng, F., Xiao, Y., Wang, W., & Wu, X. (2020). Peach PpSnRK1 Participates in Sucrose-Mediated Root Growth Through Auxin Signaling. *Frontiers in Plant Science*, 11. <https://doi.org/10.3389/fpls.2020.00409>

Zuidema, P.A., P. A. Leffelaar, W. Gerritsma, L. Mommer, dan N. P. R. Anten. 2005.

A physiological production model for cocoa (*Theobroma cacao*): model presentation, validation and application. *Agricultural System*, 84, 195-225.