

## DAFTAR PUSTAKA

- Ahmad, A. R., Juwita, Ratulangi, S.A.D. & Malik, A. 2015. Penetapan kadar fenolik dan flavonoid total ekstrak metanol buah dan daun patikala (*Etilingera elatior* Jacq. R.M.SM). *Pharmaceutical Sciences and Research*. 2(1) : 1–10.
- Ai, N. S. & Banyo, Y. 2011. Konsentrasi klorofil daun sebagai indikator kekurangan air pada tanaman. *Jurnal Ilmiah Sains*. 11(2) : 166–173.
- Alexieva, V., Sergiev, I. Mapelli, S. & Karanov, E. 2001. The effect of drought and ultraviolet radiation on growth and stress markers in pea and wheat. *Plant, Cell and Environment*. 24(12) : 1337–1344.
- Asano, T., Hayashi, N., Kobayashi, M., Aoki, N., Miyao, A., Mitsuhara, I., Ichikawa, H., Komatsu, S., Hirochika, J., Kikuchi, S. & Ohsugi, R. 2012. A rice calcium-dependent protein kinase OsCPK12 oppositely modulates salt-stress tolerance and blast disease resistance. *Plant Journal*, 69(1) : 26–36.
- Ashraf, M. & Harris, P. J. C. 2013. Photosynthesis under stressful environments: An overview. *Photosynthetica*. 51(2) : 163–190.
- Bacon, M. A., Thompson, D. S. & Davies, W. J. 2016. Can cell wall peroxidase activity explain the leaf growth response of *Lolium temulentum* L. during drought. *Journal of Experimental Botany*. 48(317) : 2075
- Barker, A. V. & Pilbeam, D. J. 2006. Plant nutrition. *Forum American Bar Association*. 49 : 662.
- Bates, L. S., Waldren, R. P. & Teare, I. D. 1973. Short Communication : Rapid Determination of Free Proline For Water-Stress Studies. *Plant and Soil*. 39 : 205–207.
- Biehler, K. & Fock, H. 1996. Evidence for the contribution of the Mehler-peroxidase reaction in dissipating excess electrons in drought-stressed wheat. *Plant physiology*. 112(1) : 265–272.
- Balittan. 2005. Kriteria Penilaian Sifat Kimia Tanah. Balittan. Kementerian Pertanian
- Cakmak, I. 2005. The role of potassium in alleviating detrimental effects of abiotic stresses in plants. *Journal of Plant Nutrition and Soil Science*. 168(4) : 521–530.
- Caliman, J. P. & Southworth, A. 1998. Effect of drought and haze on the performance of oil palm. In. 1998 International Oil Palm Conference. CIRAD-CP : 1–39
- Campbell, K. 2003. Ototoxicity: understanding oxidative mechanisms. *J Am Acad Audiol*. 14(3) : 121–123.

- Carr, M. K. V. 2011. The water relations and irrigation requirements of oil palm (*Elaeis guineensis*): A review. *Experimental Agriculture*. 47(4) : 629–652.
- Cha-Um, S., Takabe, T. & Kirdmanee, C. 2010. Ion contents, relative electrolyte leakage, proline accumulation, photosynthetic abilities and growth characters of oil palm seedlings in response to salt stress. *Pakistan Journal of Botany*. 42(3) : 2191–2020.
- Chaum, S., Takabe, T. & Kirdmanee, C. 2012. Physio-biochemical responses of oil palm (*Elaeis guineensis* Jacq.) seedlings to mannitol and polyethylene glycol-induced iso-osmotic stresses. *Plant Production Science*. 15(2) : 65–72.
- Cha-um, S., Yamada, N. Takabe, T. & Kirdmanee, C. 2013. Physiological features and growth characters of oil palm (*Elaeis guineensis* jacq.) in response to reduced water-deficit and rewatering. *Australian Journal of Crop Science*. 7(3) : 432–439.
- Chakraborty, U. & Pradhan, B. 2012. Drought stress-induced oxidative stress and antioxidative responses in four wheat (*Triticum aestivum* L.) varieties. *Archives of Agronomy and Soil Science*. 58(6) : 617–630.
- Cheng xu, S., Cao, H., Shao, H., Lei, X & Xiao, Y. 2011. Growth and physiological responses to water and nutrient stress in oil palm. *African Journal of Biotechnology*. 10(51) : 10465–10471.
- Cirousse, C., Bournoville, R. & Bonnemain, J. 1991. Water deficit-Induced changes in concentrations in proline and some other amino acids in the phloem sap of alfalfa. *Plant Physiol*. 111 : 109–113.
- Colebrook, E. H., Thomas, S. G., Philips, A. L. & Hedden, P. 2014. The role of gibberellin signalling in plant responses to abiotic stress. *Journal of Experimental Biology*. 217(1) : 67–75.
- Corley, R.H.V. & Tinker, P. B. 2003. *The oil palm*. 4th edition. Wiley. Hoboken. 562 p
- Cornaire, B., Daniel, C., Zuily-Fodly, Y. & Lamade, E. 1994. Comportamiento de la palma de aceite bajo estrés hídrico. *Palmas*. 15(1) : 61–70.
- Darlan, N. H., Pradiko, I., Winarna & Siregar, H. H. 2016. Dampak el nino 2015 terhadap performa tanaman kelapa sawit di bagian selatan sumatera (effect of el nino 2015 on oil palm performance in southeastern part of sumatera). *Jurnal Tanah dan Iklim (Indonesian Soil and Climate Journal)*. 40(2) : 113–120.
- Departemen Tanah. 2017. Hasil Analisis Tanah. Fakultas Pertanian UGM
- Denness, L., McKenna, J. F., Segonzac, C., Wormit, A., Madhou, P., Bennett, M., Mansfield, J., Zipfel, C., & Hamann, T. 2011. Cell wall damage-induced lignin biosynthesis is regulated by a reactive oxygen species- and jasmonic acid-dependent process in arabidopsis. *Plant Physiology*. 156(3) : 1364–1374.

- Dewi, A. Y., Putra, E. T. S. & Trisnowati, S. 2014. Induksi ketahanan kekeringan delapan hibrida kelapa sawit (*Elaeis guineensis*) dengan silika. *Vegetalika*. 3(3) : 1–13.
- Farooq, M., Wahid, A., Kobayashi, N., Fujita, D. & Basra, S. M. A. 2009. Review article : plant drought stress : effects, mechanisms and management. 29 : 185–186.
- Feng, H., Guan, G., Sun, K., Wang, Y., Zhang, T. & Wang, R. 2013. Expression and signal regulation of the alternative oxidase genes under abiotic stresses. *Acta Biochim Biophys Sin*. 45(12) : 985–994.
- Ferreira, J. A., Mafra, I., Soares, R., Evtuguin, D. V. & Coimbra, M. A. 2006. Dimeric calcium complexes of arabinan-rich pectic polysaccharides from *Olea europaea* L. cell walls. *Carbohydrate Polymers*. 65(4) : 535–543.
- Foyer, C. H. & Noctor, G. 2005. Oxidant and antioxidant signaling in plants: a re-evaluation of the concept of oxidative stress in a physiological context. *Plant, Cell and Environment*. 28 : 1056–1071.
- Fry, S. C. 1988. The growing plant cell wall: chemical and metabolic analysis. *New Phytologist* (2004) 161 : 641–675.
- Fukushima, K. & Terashima, N. 1991. Heterogeneity in formation of lignin. *Wood Science and Technology*. 381 : 371–381.
- Gall, H. L., Philippe, F., Domon, J., Gillet, F., Pelloux, J & Rayon, C. 2015. Cell wall metabolism in response to abiotic stress. *Plants*. 4(1) : 112–166.
- Giel, P. & Bojarczuk, K. 2011. Effects of high concentrations of calcium salts in the substrate and its pH on the growth of selected rhododendron cultivars. *Acta Societatis Botanicorum Poloniae*. 80(2) : 105–114.
- Gilliam, M., Dayod, M., Hocking, B. J. Xu, B., Conn, S. J., Kaiser, B. N., Leigh, R. A. & Tyerman, S. D. 2011. Calcium delivery and storage in plant leaves : exploring the link with water flow. 62(7) : 2233–2250.
- Guo, Y. Y., Yu, H. Y., Yang, M. M., Kong, D. S. & Zhang, Y. J. 2018. Effect of drought stress on lipid peroxidation, osmotic adjustment and antioxidant enzyme activity of leaves and roots of *Lycium ruthenicum* murr. seedling. *Russian Journal of Plant Physiology*. 65(2) : 244–250.
- Hare, P. D., Cress, W. A. & Van Staden, J. 1999. Proline synthesis and degradation: A model system for elucidating stress-related signal transduction. *Journal of Experimental Botany*. 50(333) : 413–434.
- Hartiko, H. 1987. Laporan Penelitian : Optimasi Metode Pengukuran Kegiatan Nitrat Reduktase In-Vivo Daun Berbagai Species Tanaman Produksi. Yogyakarta: Fakultas Biologi UGM. 1–34. [https://repository.ugm.ac.id/digitasi/download.php?file=3354\\_hjn\\_201307005\\_Hari-Hartiko.pdf](https://repository.ugm.ac.id/digitasi/download.php?file=3354_hjn_201307005_Hari-Hartiko.pdf)

- Harun, M. H. 1997. Proline accumulation in the leaves of water stressed oil palm (*Elaeis guineensis* Jacq.) seedlings. *Elaeis*. 9(2) : 93–9.
- Heath, R. L. & Packer, L. 1968. Photoperoxidation in isolated chloroplasts of fatty acid peroxidation chlorophyll. *Archives of biochemistry and biophysics*. 126 : 189–198.
- Hilu, K. W. & Randall, J. L. 1984. Convenient Method for Studying Grass Leaf Epidermis. *Taxon*. 33(3), 413–415.
- Hochberg, U., Bonel, A. G., Schwartz, R. D., Degu, A., Fait, A., Cochard, H., Peterlunger & Herrera, J. C. 2017. Grapevine acclimation to water deficit: the adjustment of stomatal and hydraulic conductance differs from petiole embolism vulnerability. *Planta*. 245(6) : 1091–1104.
- Hong-Bo, S., Li-Ye, C. & Ming-An, S. 2008. Calcium as a versatile plant signal transducer under soil water stress. *BioEssays*. 30(7) : 634–641.
- Jaleel, C. A., P. Manivannan, A. Wahid, M. Farooq, Somasundaram, R. & Pannarselvam, R. 2009. Drought stress in plants: a review on morphological characteristics and pigments composition. *Int J Agric*. 11 : 100–105.
- Jarvis, M. C., Forsyth, W. & Duncan, H. J. 1988. A survey of the pectic content of nonlignified monocot cell walls. *Plant Physiology*. 88(2) : 309–314.
- Jazayeri, S. M., Rivera, Y. D., Camperos-Reyes, J. E. & Romero, H. M. 2015. Physiological effects of water deficit on two oil palm (*Elaeis guineensis* Jacq.) genotypes. *Agronomía Colombiana*, 33(2) : 164–173.
- Jie, G., Ge, W., Hai-tao, C. & Shi, S. Q. 2012. Effects of in situ deposited calcium carbonate nanoparticles on tensile performance of single bamboo fibers and their composites. *Proceedings of the 55th International Convention of Society of Wood Science and Technology*. Beijing, CHINA. 1–9.
- Jourdan, C. & Rey, H. 1997. Modelling and simulation of the architecture and development of the oil-palm (*Elaeis guineensis* jacq.) root system: II. Estimation of root parameters using the racines postprocessor. *Plant and Soil*. 190(2) : 235–246.
- Kishor, P., Sangam, S., Amrutha, R. & Laxmi, P. 2005. Uptake and transport in higher plants: its implications in plant growth and abiotic stress. *Curr. Sci*. 34(3) : 5–18.
- Knight, H., Trewavas, A. J. & Knight, M. R. 1997. Calcium signalling in *Arabidopsis thaliana* responding to drought and salinity. *Plant Journal*. 12(5) : 1067–1078.
- Kobayashi, M., Nakagawa, H., Asaka, T. & Match, T. 1999. Borate-rhamnogalacturonan ii bonding reinforced by ca<sup>2+</sup> retains pectic polysaccharides in higher-plant cell walls. *Plant Physiology*. 119(1) : 199–204.

- Kolupaev, Y. E., Akinina, G. E. & Mokrousov, A. V. 2005. Induction of heat tolerance in wheat coleoptiles by calcium ions and its relation to oxidative stress. *Russian Journal of Plant Physiology*. 52(2) : 199–204.
- Laanemets, K., Brandt, B., Li, J., Merilo, E., Wang, Y., Keshwani, M. M., Taylor, S. S., Kollist, H. & Schroeder, J. I. 2013. Calcium-dependent and -independent stomatal signaling network and compensatory feedback control of stomatal opening via  $ca^{2+}$  sensitivity priming. *Plant Physiology*. 163(2) : 504–513.
- Lawlor, D. W. 2002. Limitation to photosynthesis in water-stressed leaves: stomata vs . metabolism and the role of ATP. *Annals of Botany*. 89 : 871 - 885.
- Leucci, M. R. Lenucci, M., S., Piro, G. & Dalessandro, G. 2008. Water stress and cell wall polysaccharides in the apical root zone of wheat cultivars varying in drought tolerance. *Journal of Plant Physiology*. 1168–1180.
- Li, M., Wang, G. & Lin, J. 2003. Application of external calcium in improving the PEG-induced water stress tolerance in liquorice cells. *Bull. Acad. Sin.* 44 : 275–284.
- Lichtenthaler, H. K. & Buschmann, C. 2001. Chlorophylls and Carotenoids: Measurement and Characterization by UV-VIS. *Current Protocols in Food Analytical Chemistry*. 1–8.
- Litvin, A. G. 2015. Interaction of drought stress and gibberellin metabolism on stem elongation in tomato. Thesis. University of Georgia
- Liu, C. J. 2012. Deciphering the enigma of lignification: precursor transport, oxidation, and the topochemistry of lignin assembly. *Molecular Plant*. 5(2) : 304–317.
- Liu, T. Zhu, S., Fu. L., Y. Yu., Q. Tang & S. Tang. 2013. Morphological and physiological changes of ramie (*Boehmeria nivea* L. Gaud) in response to drought stress and GA3 treatment. *Russian Journal of Plant Physiology*. 60(6) : 749–755.
- LPPT. 2017. Laporan Hasil Uji Tanah. Laboratorium Penelitian dan Pengujian Terpadu UGM
- Mafakheri, A., Siosemardeh, A., Bahramnejad, B., Struik, P. C., Sohrabi, Y. 2010. Effect of drought stress on yield, proline and chlorophyll contents in three chickpea cultivars. *Australian Journal of Crop Science*. 4(8) : 580–585.
- Marschner, P. 2012. Marschner ' s Mineral Nutrition of Higher Plants Third Edition. Elsevier. 649.
- Matin, M., Brown, J. & Ferguson, H. (1989). Leaf water potential, relative water content, and diffusive resistance as screening techniques for drought resistance in barley. *Agronomy Journal*. 100–105.

- Mckersie, B. D., Bowley, S. R., Harjanto, E & Leprince, O. 2018. Water-deficit tolerance and field performance of transgenic alfalfa overexpressing superoxide dismutase. 111(4) : 1177–1181.
- Mclaughlin, S. B. & Wimmer, R. 1999. Calcium physiology and terrestrial ecosystem processes. *New Phytol.* 142 : 373 - 417
- MdNoor, M. R., Harun, M. H. & Jantan, N. M. 2011. Physiological plant stress and responses in oil palm. *Oil Palm Bulletin.* 62 : 25–32.
- Medrano, H., Escalona, J. M., Bota, J., Guliãas, J & Flexas, J. 2002. Regulation of photosynthesis of C3 plants in response to progressive drought : stomatal conductance as a reference parameter. *Annals of Botany.* 89 : 895-905
- Meng, L. L., Song, J. F., Wen, J., Zhang, J. & Wei, H. 2016. Effects of drought stress on fluorescence characteristics of photosystem II in leaves of *Plectranthus scutellarioides*. *Photosynthetica.* 54(3) : 414–421.
- Meyer, S. & Genty, B. 1999. Heterogeneous inhibition of photosynthesis over the leaf surface of *Rosa rubiginosa* L . during water stress and abscisic acid treatment: induction of a metabolic component by limitation of CO<sub>2</sub> diffusion. *Planta.* 210 : 126–127.
- Misra, N. & Gupta, A. K. 2006. Effect of salinity and different nitrogen sources on the activity of antioxidant enzymes and indole alkaloid content in *Catharanthus roseus* seedlings. *Journal of Plant Physiology.* 163 : 11 - 18.
- Mohammadkhani, N. & Heidari, R. 2007. Effects of water stress on respiration, photosynthetic pigments and water content in two maize cultivars. *Pakistan Journal of Biological Sciences.* 10(22) : 4022–4028.
- Naeem, M. Naeem, M. S., Ahmad, R. & Ahmad, R. 2017. Foliar-applied calcium induces drought stress tolerance in maize by manipulating osmolyte accumulation and antioxidative responses. *Pakistan Journal of Botany.* 49(2) : 427–434.
- Nakashima, K., Yamaguchi-Shinozaki, K. & Shinozaki, K. 2014. The transcriptional regulatory network in the drought response and its crosstalk in abiotic stress responses including drought, cold, and heat. *Frontiers in Plant Science.*
- Nikolaeva, M. K. Maevskaya, S.N., Shugaev, A. G. & Bukhov, N. G. 2010. Effect of drought on chlorophyll content and antioxidant enzyme activities in leaves of three wheat cultivars varying in productivity. *Russian Journal of Plant Physiology.* 57(1) : 87 95
- Ningsih, E. P., Sudrajat & Supijanto. 2015. Optimasi dosis pupuk kalsium dan magnesium pada bibit kelapa sawit (*Elaeis guineensis* Jacq.) di pembibitan utama. *Jurnal Agronomi Indonesia.* 4 (1) : 81 - 88

- O'Neill, M. A., Warrenfeltz, D. Kates, K., Pellerin, P., Doco, T., Darvill, A. G. & Albersheim, P. 1996. Rhamnogalacturonan-II, a pectic polysaccharide in the walls of growing plant cell, forms a dimer that is covalently cross-linked by a borate ester. In vitro conditions for the formation and hydrolysis of the dimer. *Journal of Biological Chemistry*, 271(37) : 22923–22930.
- Okamoto, M., Peterson, F. C., Defriesa, A., Parka, S., Endod, A., Nambarad, E., Volkman, B. F. & Cutler, S. R. 2013. Activation of dimeric ABA receptors elicits guard cell closure, ABA-regulated gene expression, and drought tolerance. *PNAS*. 110(29) : 1 - 6
- Parry, M. A. J., Flexas, J. & Medrano, H. 2005. Prospects for crop production under drought: research priorities and future directions. *Annals of Applied Biology*. 147(3) : 211–226.
- Pego, J. V., Kortstee, A. J., Huijser, C. & Smeekens, S. C. M. 2000. Photosynthesis, sugars and the regulation of gene expression. *Journal of Experimental Botany*. 51 : 407–416.
- Peltzer, D., Dreyer, E. & Polle, A. 2002. Differential temperature dependencies of antioxidative enzymes in two contrasting species: *Fagus sylvatica* and *Coleus blumei*. *Plant Physiology and Biochemistry*. 40(2) : 141–150.
- Piro, G., Leucci, M., Waldron, K. & Dalessandro, G. 2003. Exposure to water stress causes changes in the biosynthesis of cell wall polysaccharides in roots of wheat cultivars varying in drought tolerance. *Plant Science*. 165 : 559 - 569.
- Polko, J. K., Voenesek, L. A. C. J., Peeters & A. J. M., Ronald, P. 2011. Petiole hyponasty: An ethylene-driven, adaptive response to changes in the environment. *AoB Plants*. 11(1) : 1–11.
- Pospílová, J., Synková, H. & Rulcová, J. 2000. Cytokinins and water stress. *Biologia Plantarum*. 43(3) : 321–328.
- Potgieter, M. J. & Wessels, D. C. J. 1998. The anatomy and morphology of petioles and leaflets of *Hardwickia mopane* (Leguminosae: Caesalpinioideae). *South African Journal of Botany*. 64(5) : 281–289.
- Price, A. H. & Hendry, G. A. F. 1991. Iron-catalyzed oxygen radical formation and its possible contribution to drought damage in nine native grasses and three cereals. *Plant Cell and Environment*. 14(5) : 477–484.
- Putra, E. T. S., Issukindarsyah, Taryono, Purwanto, B. H. 2015. Physiological responses of oil palm seedlings to the drought stress using boron and silicon applications. *Journal of Agronomy*. 1–13.
- Ralph, J., Hoon, K., Fachuang, L. & Jane, M. 2004. Lignins : Natural polymers from oxidative coupling of 4-hydroxyphenyl-propanoids. *Phytochemistry Reviews*, 3 : 29–60.

- Ray, J. D. & Sinclair, T. R. 1998. The effect of pot size on growth and transpiration of maize and soybean during water deficit stress. *Journal of Experimental Botany*. 49(325) : 1381–1386.
- Reddy, A. S. N. 2001. Review Calcium: silver bullet in signaling. *Plant Science*. 160 : 381–404.
- Rivera-Mendes, Y. D., Cuenca, J. C. & Romero, H. M. 2016. Physiological responses of oil palm (*Elaeis guineensis* Jacq.) seedlings under different water soil conditions. *Agronomía Colombiana*. 34 : 163.
- Ruiz, J. M. Rivero, R. M., Cantarero, I. L. & Romero, L. 2003. Role of Ca<sup>2+</sup> in the metabolism of phenolic compounds in tobacco leaves (*Nicotiana tabacum* L.). *Plant Growth Regulation*. 41 : 173–177.
- Shao, H. B., Chu, L., Jaleel, C. A., Zhao, C. 2008. Water-deficit stress-induced anatomical changes in higher plants. *Comptes Rendus - Biologies*. 331 : 215–225.
- Sharma, P. & Dubey, R. S. 2005. Drought induces oxidative stress and enhances the activities of antioxidant enzymes in growing rice seedlings. *Plant Growth Regulation*. 46 : 209–221.
- Sharma, P. Jha, A. B., Dubey, R. S. & Pessarakli, M. 2012. Reactive oxygen species , oxidative damage and antioxidative defense mechanism in plants under stressful conditions. *Journal of Botany*. 2016 : 1-26
- Shekari, F., Soltaniband, V., Javanmard, A., 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.). 34 : 81–90.
- Shukla, N., Awasthi, R. P., Rawat, A. L., Rawat, J. K. L. & Kumar, J. 2012. Biochemical and physiological responses of rice (*Oryza sativa* L.) as influenced by *Trichoderma harzianum* under drought stress. *Plant Physiology and Biochemistry*. 54 : 78–88.
- Singh, H. C. P., Shivashankara, K. S. & Rao, N. K. S. 2013. Climate-resilient horticulture: Adaptation and mitigation strategies. 1–302.
- Siregar, H. H., Purba, A. & Symasudin, E. 1995. Penanggulangan kekeringan pada tanaman kelapa sawit. 3 : 9–13.
- SMARTRI. 2014. SOP of Experimental Nursery.
- Song, W. Y. Zhang, Z. B., Shao, H. B., Guo, X. L., Cao, H. X., Zhao, H. B., Fu, Z. Y. & Hu, X. J., 2008. Relationship between calcium decoding elements and plant abiotic-stress resistance. *International Journal of Biological Sciences*. 4(2) : 116–125.
- Storey, R., Jones, R. G. W., Schachtman, D. P. & Treeby, M. T. 2003. Calcium-accumulating cells in the meristematic region of grapevine root apices. *Functional Plant Biology*. 30(6) : 719–727.

- Suresh, K., Nagamani, C., Ramachandrudu, K. & Mathur, R. K. Gas-exchange characteristics, leaf water potential and chlorophyll a fluorescence in oil palm (*Elaeis guineensis* Jacq.) seedlings under water stress and recovery. *Photosynthetica*. 48 : 430–436.
- Taiz, L. & Zeiger, E. 2003. *Plant Physiology* 3rd ed. Sinauer Associates. 690 hal
- Teixeira, A. F. Andrade, A. D. B., Filho, O., F. & Ferrarese, M. D. L. L. 2006. Role of calcium on phenolic compounds and enzymes related to lignification in soybean (*Glycine max* L.) root growth. *Plant Growth Regulation*. 49 : 69–76.
- Tenhaken, R. 2015. Cell wall remodeling under abiotic stress. *Frontiers in Plant Science*. 5 : 1–9.
- Tezara, W. Mitchell, V. J., Driscoll, S. D. & Lawlor, D. W. 1999. Water stress inhibits plant photosynthesis by decreasing coupling factor and ATP. *Nature*. 401 : 914 - 917
- Tomas-Barberan, F. A., Gil, M. I., Castaner, M., Artes, F. & Saltvei, M. E. 1997. Effect of Selected Browning Inhibitors on Phenolic Metabolism in Stem Tissue of Harvested Lettuce. *Journal of Agricultural and Food Chemistry*. 45 : 583–589.
- Toruan-Mathius, N., Wijana, G., Guharja, E., Aswidinnoor, H., Yahya, S. & Subronto. 2001. Respons tanaman kelapa sawit (*Elaeis guineensis* Jacq) terhadap cekaman kekeringan. *Menara Perkebunan*. 69 : 29–45.
- Tuteja, N. 2009. Integrated calcium signaling in plants. *Signaling in Plants, Signaling and Communication in Plants*. 29–49.
- Tuteja, N. & Mahajan, S. 2005. Cold, salinity, and drought stress. *Archives of Biochemistry and Biophysics*. 444 : 139–158.
- Tuteja, N. & Mahajan, S. 2007. Calcium signaling network in plants: An overview. *Plant Signaling and Behavior*. 2 : 79–85.
- Uexkull, H. R. von & Fairhurst, T. H. 1991. Fertilizing for high yield and quality the oil palm. *International Potash Institute*. 77 hal.
- Wallace, A. & Mueller, R. T. 1980. Calcium uptake and distribution in plants. *Journal of Plant Nutrition*. 2 : 247–256.
- Wang, Y. J., Hao, Y. J., Zhang, Z. G., Chen, T., Zhang, J. S. & Chen, S. Y. 2005. Isolation of trehalose-6-phosphate phosphatase gene from tobacco and its functional analysis in yeast cells. *Journal of Plant Physiology*. 162 : 215–223.
- White, P. J. & Broadley, M. R. 2003. Calcium in plants. *Annals of Botany*. 92 : 487–511.

- Wilkinson, S. & Davies, W. J. 2002. ABA-based chemical signalling: the co-ordination of responses to stress in plants. *Plant Cell and Environment*. 25 : 195 - 210.
- Wu, H. C., Huang, Y. C., Stracovsky, L & Jinn, T. L. 2017. Pectin methylesterase is required for guard cell function in response to heat. *Plant Signaling & Behavior*.
- Yamaguchi, F., Ota, Y. & Hatanaka, C. 1996. Extraction and purification of pectic polysaccharides from soybean okara and enzymatic analysis of their structures. *Carbohydrate Polymers*. 30 : 265–273.
- Zhang, L., Peng, J., Chen, T. T., Zhao, X. H., Zhang, S. P., Liu, S. D., Dong, H. L., Feng, L. & Yu, S. X. 2014. Effect of drought stress on lipid peroxidation and proline content in cotton roots. *Journal of Animal and Plant Sciences*. 24(6) : 1729–1736.
- Zhang, S. Q. & Outlaw, W. H. Jr. 2001. Abscisic acid introduced into the transpiration stream accumulates in the guard-cell apoplast and causes stomatal closure. *Plant Cell and Environment*. 24 : 1045–1054.
- Zieslin, N. & Abolitz, M. 1994. Leakage of phenolic compounds from plant roots: effects of pH, Ca<sup>2+</sup> and NaCl. *Scientia Horticulturae*. 58(4) : 303–314.