

## DAFTAR PUSTAKA

- Ali, Z. M., Lieng-Hong C., and H. Lazan. 2004. A comparative study on wall degrading enzymes, pectin modifications and softening during ripening of selected tropical fruits. *Plant Science* 167: 317–327.
- Anonim. 2016. Anthracnose. *Encyclopædia Britannica*. *Encyclopædia Britannica Online*. <<http://www.britannica.com/science/anthracnose>>. Diakses 8 Januari 2016
- Agarie, S., N. Hanaoka, O. Ueno, A. Miyazaki, F. Kubota, W. Agata, and P.B. Kaufman. 1998. Effect of silicon on tolerance to water deficit and heat stress in rice plants (*Oryza sativa* L.), monitored by electrolyte leakage. *Plant Prod. Sci.* 1: 96-103.
- Alstonville. 1983. Australian Banana Growers Council: Banana Nutrient. <[abgc.org.au/wp-content/.../Factsheet-4-scan.pdf](http://abgc.org.au/wp-content/.../Factsheet-4-scan.pdf)>. Diakses 20 Juni 2015.
- Amnuaysn, N., K. Seraypheap, and M. Kidyoo. 2012. Anatomical changes in peel structure of ‘Hom Thong’ banana during fruit development and ripening. *Tropical Natural History* 12 : 127-136.
- Aurore, G., B. Parfait, and L. Fahrasmane. 2008. Bananas, raw materials for making processed food products. *Trends in Food Science and Technology* xx: 1-13.
- Badan Pusat Statistik. 2013. Produksi Buah-buahan dan Sayuran Tahunan di Indonesia Tahun 1995-2013. <[http://www.bps.go.id/tab\\_sub/view.php?kat=3&tabel=1&daftar=1&id\\_subyek=55&notab=16](http://www.bps.go.id/tab_sub/view.php?kat=3&tabel=1&daftar=1&id_subyek=55&notab=16)>. Diakses tanggal 7 Oktober 2014.
- Brummell, D. A., M. H. Harpster, P. M. Civello, J. M. Palys, A. B. Bennet, and P. Dunsmuir. 1999. Modification of expansin protein abundance in tomato fruit alters softening and cell wall polymer metabolism during ripening. *The Plant Cell* 11: 2203-2216.
- Brummell, D. A. and M. H. Harpster. 2001. Cell wall metabolism in fruit softening and quality and its manipulation in transgenic plants. *Plant Mol. Biol.* 47: 311-339.
- Cahyono. 2009. *Usaha Tani dan Penanganan Pascapanen Pisang*. Kanisius, Yogyakarta.
- Cakmak, I. And E. A. Kirkby. 2008. Role of magnesium in carbon partitioning and alleviating photooxidative damage. *Plant Physiol* 133 : 692-704.
- Ding, P., S. H. Ahmad, A. R. A. Razak, N. Saari, and M. T. M. Mohamed. 2007. Plastid ultrasructure, chlorophyll contents, and colour expression during ripening of

cavendish banana (*Musa acuminata* 'Williams') at 18°C and 27°C. New Zealand Journal of Crop and Horticultural Science 35: 201-210.

- Dominguez-Puigjaner, E., I. Liop, M. Vendrell, S. Prat. 1997. A cDNA clone highly expressed in ripe banana fruit shows homology to pectate lyases. Plant Physiology 114: 1071–1076.
- Epstein, E. and A. J. Bloom. 2004. Mineral Nutrition of Plants: Principles and Perspective 2nd Edition. Sinaur Associates, USA.
- Espino, R. C., S. H. Jamaluddin, B. Silayoi dan R. E. Nasution. 1999 *Musa* L. (kultivar yang dapat dimakan). In: E. W. M. Verheij dan R. E. Coronel (Eds.). PROSEA Sember Daya Nabati Asia Tenggara 2, Buah-Buahan yang Dapat Dimakan. Gramedia Pustaka Utama, Jakarta.
- Fahn, A. 1990. Plant Anatomy 4<sup>th</sup> editions. Pergamon Press, Oxford.
- Ferreira, C. F., S. O. Silva, N. P. Sobrihno and O. P. Paz. 2004. Molecular characterization of banana (AA) diploid with contrasting level of black and yellow sigatoka resistance. American Journal Applied Science 1 : 276-278.
- Gardner, F. P., R. B. Pearce, dan R. L. Mitchell. 2008. Physiology of Crop Plants (Fisiologi Tanaman Budidaya, alih bahasa H. Susilo dan Subiyanto). Universitas Indonesia Press, Jakarta.
- Gillman, J. H., D. C. Zlesak, and J. A. Smith. 2003. Applications of potassium silicate decrease black spot infection in *Rosa hybrida* 'Meipelta'. Horticulture Science 38 : 1144-1147.
- Golding, J. B., D. Shearer, S. G. Wyllie, W. B. McGlasson. 1998. Application of 1-MCP and propylene to identify ethylene dependent ripening processes in mature banana fruit. Postharvest Biol. Technol. 14: 87–98.
- Goulao L. F. dan C. M. Oliveira. 2008. Cell wall modifications during fruit ripening: when a fruit is not the fruit. Trends in Food Science and Technology 19: 4-25.
- Gowen, S. 1995. Bananas and Plantains. Springer Science+Business Media Dordrecht, London.
- Hadfiel, K. A. and A. B. Bennet. 1998. Polgalacturonases: many genes in search of a function. Plant Physiology 117:337-343.
- Haifa. 2015. Banana. <[www.haifa-group.com/files/guides/banana.pdf](http://www.haifa-group.com/files/guides/banana.pdf)>. Diakses tanggal 1 Januari 2015.
- Heldt, Hans-Walter. 2005. Plant Biochemistry 3<sup>rd</sup> ED. Academic Press, USA.

- Henriet, C., Bodarwe, L., Dorel, M., Draye, X. and Delvaux, B. 2008. Leaf silicon content in banana (*Musa spp.*) reveals the weathering stage of volcanic ash soils in Guadeloupe. *Plant Soil* 313 : 71-82.
- Hermans, C. and N. Verbruggen. 2005. Physiological characterization of magnesium deficiency in *Arabidopsis thaliana*. *J. Exp. Bot.* 56 : 2153–2161.
- Hermans, C. and N. Verbruggen. 2013. Physiological and molecular responses to magnesium nutritional imbalance in plant. *Plant Soil* 368:87-99.
- Ishii, T. and T. Matsunaga. 2001. Pectic polysaccharide rhamnogalacturonan II is covalently linked to homogalacturonan. *Phytochemistry* 57 : 969-974.
- Jones, Jr. and J. Benton. 2005. *Hydroponics: A Practical Guide for the Soilless Grower*. 2<sup>nd</sup> ed. CRC Press, New York.
- Jones, Jr. and J. Benton. 2011. *Hydroponic Handbook: How hydroponic growing system works*. GroSystems, Inc, Anderson, SC.
- Jones, J. B., Jr., B. Wolf, and H .A. Mills. 1991. *Plant Analysis Handbook*. Micro-Macro Publishing, Inc. Athens, GA.
- Kablan, L., A. Lagauche, B. Delvaux, and A. Legreve. 2012. Silicon reduce black sigatoka development in bananas. *Plant Disease* 96: 273-278.
- Liang, Y., Sun, W., Zhu, Y.G., and Christie, P. 2007. Mechanisms of silicon-mediated alleviation of abiotic stresses in higher plants: a review. *Environmental Pollution* 147: 422-428.
- Liu, X. J., S. Shiomo, A. Nakatsuka, Y. Kubo, R. Nakamura, and A. Inaba. 1999. Characterization of ethylene biosynthesis associated with ripening in banana fruit. *Plant Physiology* 121: 1257-1265.
- Makarim, A. K., E. Suhartatik, dan A. Kartohardjono. 2007. Silikon: hara penting pada sistem produksi Padi (*Oryza sativa*). *Tanaman Pangan* 2:2.
- Marschner, Hort. 1995. *Mineral Nutrition of Higher Plants* 2<sup>nd</sup> Editions. Academic Press, London.
- Marschner, Petra. 2012. *Marschner's Mineral Nutrition of Higher Plants* 3<sup>rd</sup> Editions. Academic Press, London.
- Matile, P, S. Hortensteiner, and H. Thomas. 1999. Chlorophyll degradation. *Annual Review Plant Physiology Plant Molecular Biology* 50: 67–95.
- Matoh, T. dan M. Kobayashi. 1998. Boron and calcium, essential inorganic constituents of pectin polysaccharides in higher plant cell walls. *Journal Plant Research* 111 : 179-190.

- Mattoo, A. K., K. Chachin, C. T. Phan, E. B. Pantastico. 1993. Perubahan-perubahan kimiawi selama pematangan dan penuaan. Di dalam: E. B. Pantastico (ed). Fisiologi Pasca Panen dan Pemanfaatan Buah-buahan dan Sayur-sayuran Tropika dan Subtropika. (Terjemahan oleh Kamariyani). Gadjah Mada University Press, Yogyakarta.
- Molina, A. B. and V. N. Roa. 2000. Advancing Banana and Plantain R & D in Asia and The Pacific. International Plant Genetic Resouce Institute. INIBAP, France.
- Mostafa, E. A. M., M. M. S. Saleh and M. M. M. Abd-El-Migeed. 2007. Response of banana plants to soil and foliar applications of magnesium. American Eurasian Journal Agriculture Environment Science 2 : 141-146.
- Nakasone, H. Y. and R. E. Paull. 1999. Tropical Fruits. Biddles Ltd. Guildford and King's Lynn, UK.
- Nelson, S. C., R. C. Ploetz, and A. K. Kepler. 2006. Species Profiles for Pacific Island Agroforestry. <[www.traditionaltree.org](http://www.traditionaltree.org)>. Diakses tanggal 12 Februari 2015.
- Pathak, N., and G. G. Sanwal. 1998. Multiple forms of polygalacturonase from banana fruits. Phytochemistry 48: 249-255.
- Payasi, A., N. N. Mishra, A. L. S. Chaves, and R. Singh. 2009. Biochemistry of fruit softening: an overview. Physiology Molecular Biology Plants 15: 103-114.
- Pillay, M and A. Tenkouano. 2011. Banana Breeding: Progress and Challenges. CRC Press. Taylor and Francis Group. United State.
- Purseglove, J.W. 1978. Tropical Monocotyledons 2nd Edition. Longman Group Limited, London.
- Putra, E.T.S. 2011. Weak Neck Problem in *Musa* sp. cv. Rastali Populations in Relation to Magnesium, Boron and Silicon Availability. Faculty of Agriculture. University Putra Malaysia. Disertasi Doktor.
- Rerkasem, B. dan S. Jamjod. 2004. Boron deficiency in wheat: a review. Field Crops Research 89: 173–186.
- Robinson, J.C. 1995. System of cultivation and management. In: Gowen, S.(Ed.) Bananas and plantains. Chapman and Hall, London.
- Roedyarto. 1997. Budidaya Pisang Ambon. Trubus, Surabaya.
- Sahebi M., M. M. Hanafi, A. S. N. Akmar, M. Y. Rafii, P. Azizi, F. F. Tengoua, J. N. M. Azwa, and M. Shabanimofrad. 2015. Importance of Silicon and Mechanisms of Biosilica Formation in Plants. BioMed Research International.

- Saleem, M., Khanif Y.M., F. Ishak, Samsuri A.W. and Hafeez .B. 2011. Importance of boron for agriculture productivity: a review. *Int. Res. J. Agric. Sci. Soil Sci.*: 293-300.
- Salerno, M. I., S. Gianinazzi, C. Arnould and V. Gianinazzi-Pearson, 2004. Ultrastructural and cell wall modifications during infection of *Eucalyptus viminalis* roots by a pathogenic *Fusarium oxysporum* strain. *J. Gen. Plant Pathol.*, 70: 145-152.
- Seymour, G. B., Y. Lasslett, and G. A. Tucker. 1987. Differential effects of pectolytic enzymes on tomato polyuronides in vivo and in vitro. *Phytochemistry* 26: 3137-3139.
- Simmonds, N. W. 1966. *Bananas* 2<sup>nd</sup> ED. Longman Group Limited, London.
- Singh D. P. , J. Beloy , J. K. McInerney, dan L. Day. 2012. Impact of boron, calcium and genetic factors on vitamin C, carotenoids, phenolic acids, anthocyanins and antioxidant capacity of carrots (*Daucus carota*). *Food Chemistry* 132 : 1.161-1.170.
- Soylemezoglu, G., K. Demir, A. Inal, dan A. Gunes. 2009. Effect of silicon on antioxidant and stomatal response of two grapevine (*Vitis vinifera* L.) rootstocks grown in boron toxic, saline and boron toxic-saline soil. *Scientia Horticulturae* 123: 240-246.
- Subekti, H dan B. Supriyanto. 1996. *Perbaikan Teknik Budidaya Pisang*. Balai Penelitian Tanaman Buah Solok. Pusat Penelitian dan Pengembangan Hortikultura.
- Sys, C., E. van Ranst, J. Debaveye and F. Beernaert. 1993. Land evaluation part III: Crop requirement ITC. *Sci. Univ. Ghent Agric.* 7.
- Syukur, A. 2005. Penyerapan boron oleh tanaman jagung di tanah pasir pantai bugel dalam kaitannya dengan tingkat frekuensi penyiraman dan pemberian bahan organik. *Jurnal Ilmu Tanah dan Lingkungan* 2: 20-26.
- Taylor, J.E. and G. A. Tucker. 1993. *Biochemistry of Fruit Ripening*. Chapman and Hall, New York.
- Turner, D.W., J.A. Fortescue, and D.S. Thomas. 2007. Environmental physiology of the bananas (*Musa* spp.). *Brazilian Journal of Plant Physiology* 19:463-484.
- van Asten, P. J. A., C. S. Gold, S. H. Okech, S. V. Gaidashova, W. K. Tushemereuwe, and D. De Waele. 2006. Soil quality problems in east african banana systems and their relation with other yield loss factors. *Info Musa* 13: 20-25.

- Wulandari, M. dan I. Sumardi. 2010. Anatomy and morphology character of five Indonesian banana cultivars (*Musa spp.*) of different ploidy level. *Biodiversitas* 11: 167-175.
- Wills, R. B. H., W. B. McGlasson, D. Graham, T. H. Lee, E. G. Hall. 1989. Postharvest an Introduction to The Physiology and Handling of Fruit and Vegetables. van Nostrand Reinhold, New York.
- Zhang, C., L. Wang, W. Zhang, and F. Zhang. 2013. Do lignification and silicification of the cell wall precede silicon deposition in the silica cell of the rice (*Oryza sativa* L.) leaf epidermis?. *Plant Soil* 372: 137–149.