

## DAFTAR PUSTAKA

- AAK, 2003. *Budidaya Tanaman Padi*. Kanisus. Yogyakarta. 172 hal.
- Adimihardja, A. dan S. Sutono. 2005. Teknologi pengendalian erosi lahan berlereng. Hlm. 103-145 dalam *Teknologi Pengelolaan Lahan Kering: Menuju Pertanian Produktif dan Ramah Lingkungan*. Pusat Penelitian dan Pengembangan Tanah dan Agroklimat, Bogor.
- Andri, S. dan Saputra, S. I. .2016. Pemberian Kompos Tkks Dan Cocopeat Pada Tanah Subsoil Ultisol Terhadap Pertumbuhan Bibit Kelapa Sawit ( *Elaeis Guineensis* Jacq .) di Pre Nursery. *Jurnal Agroeknologi*.7(1) : 1–6.
- Badan Pusat Statistik BPS Lampung. 2018. Luas Panen dan Produksi Padi diprovinsi Lampung.
- Bose, J., Babourina, O., Shabala, S., & Rengel, Z. (2013). Low-pH and aluminum resistance in *Arabidopsis* correlates with high cytosolic magnesium content and increased magnesium uptake by plant roots. *Plant and Cell Physiology*, 54(7), 1093-1104.
- Brady, K. U., Kruckeberg, A. R., & Bradshaw Jr, H. D. (2005). Evolutionary Evolution, and Systematics, 36, 243-266. <https://doi.org/10.1146/annurev.ecolsys.35.021103.105730>.
- Brohi, A. R., Karaman, M. R., Topbaş, M. T., Aktaş, A., & Savaşlı, E. (2000). Effect of potassium and magnesium fertilization on yield and nutrient content of rice crop grown on artificial siltation soil. *Turkish Journal of Agriculture and Forestry*, 24(4), 429–435. <https://doi.org/10.3906/tar-97158>
- Cakmark, I., & Yazici, A, M, (2010). Magnesium a forgotten element in crop production. *Better Crops*, 94(2), 23-25.
- Ceppi, M. G., Oukarroum, A., Çiçek, N., Strasser, J., & Schansker, G (2012). The IP amplitude of the fluorescence rise OJIP is sensitive to changes in the photosystem I content of leaves: a study on plants exposed to magnesium and sulfate deficiencies, drought stress and salt stress. *Physiologia plantarum*, 144(3), 277-288. <https://doi.org/10.1111/j.1399-3054.2011.01549.x>.
- Chen, Z. C., Peng, W. T., Li, J., & Liao, H. (2018). Functional dissection and transport mechanism of magnesium in plants, *Seminars in cell & Developmental Biology*, 74, 142-152. <https://doi.org/10.1016/j.semcd.2017.08.005>.
- Dechen, A. R., Carmello, Q. A. C., Monteiro, F. A., & Nogueirol, R. C. (2015). Role of magnesium in food production: an overview. *Crop and Pasture Science*, 66(12), 1213-1218.

- Dinas Pangan, Pertanian, dan Perikanan, 2018, “Unsur Hara Tanaman” <https://pertanian.pontianakkota.go.id/artikel/52-unsur-hara-tanaman.html>, diakses pada 21 Juli 2021 pada pukul 11.48 wib.
- Efendi, R., Y. Musa, M.F. Badri, M.D. Rahim, M. Azrai, M. Pabendon. 2015. Seleksi jagung inbrida dengan marka molekuler dan toleransinya terhadap kekeringan dan nitrogen rendah. *J. Penelitian Pertanian Tanaman Pangan*. 34:43-53.
- Fageria, N. K. (1998). Otimização da eficiência nutricional na produção das culturas. *Revista Brasileira de Engenharia Agrícola e Ambiental*, 2(1), 6-16. <http://dx.doi.org/10.1590/1807-1929/agriambi.v02n01p6-16>
- Fanindi, A., S.H. Sutjahjo, S.I. Aisyah, N.D. Purwantari. 2019. Morphological characteristics and productivity of guinea grass (*Panicum maximum* CV *Purple Guinea*) irradiated with gamma-ray. *Trop. Anim. Sci. J.* 42:97-105.
- Fitri, H. 2009. Uji Adaptasi Beberapa Varietas Padi Ladang (*Oryza sativa* L.) Skripsi. Universitas Sumatera Utara .Medan.
- Gomez, K. A., & Gomez, A. A. (1976) statistical procedures for agricultural research with emphasis on rice. International rice Institute, Los Banos, Philipnines. 294p.
- Grundon NJ (1987) ‘Hungry crops: a guide to nutrient deficiencies in field crops.’ (Department of Primary Industries: Brisbane, Qld)
- Hairiah, K., R. Islawiyah and Y. Widyaningsih. 1996. Amelioration of Al toxicity with organic matter: Selection of organic matter based on its total cation concentration. *Agrivita* 19 (4):158–164hal.
- Hairiah, K., Widiyanto, SR. Utami, D. Suprayogo, Sunaryo, SM. Sitompul, B. Lusiana, R. Mulia, MV. Noordwijk dan G. Cadisch. 2000. Pengelolaan Tanah Masam Secara Biologi ; Refleksi Pengalaman dari Lampung Utara. SMT Grafika Desa Putera, Jakarta. 187 hlm.
- Hairriah, K., Widiyanto., Utami, S. R., Suprayogo, D.,Sunaryo., Sitompul, S. M., Tanah Masam Secara Biologi: Refleksi pengalaman dari Lampung Utara. *World Agroforestry Centre (ICRAF): Bogor, Indonesia*, 184hal.
- Harris, KD, Vanajah, T & Puvanitha, S 2018,’ Effect of foliar application of boron and magnesium on growth and yield of green chilli (*Capsicum annum* L.). foliar application of nutrients DOI: <http://doi.org/10.4038/agrieast.v12i1.49>
- Hasanah, I. 2007. Bercocok Tanam Padi. Azka Mulia Media. Jakarta.68 hal.
- Hauer-Jäkli, M., & Tränkner, M. (2019). Critical leaf magnesium thresholds and the impact of magnesium on plant growth and photo-oxidative defense: a systematic review and meta-

analysis from 70 years of research. *Frontiers in Plant Science*, 10, 766. <https://dx.doi.org/10.3389/fpls.2019.00766>.

Hawkesford, M., Horst, W., Kichey, T., Lambers, H., Schjoerring, J., Møller, I. S., & White, P. (2012). Functions of macronutrients. In *Marschner's mineral nutrition of higher plants* (pp. 135-189). Academic Press.

Herawati, W. D. 2012. Budidaya Padi. Javelitera: Yogyakarta 100 hal.

Hermans, C., & Verbruggen, N. (2005). Physiological characterization of Mg deficiency in *Arabidopsis thaliana*. *Journal of Experimental Botany*, 56(418), 2153-2161. <https://doi.org/10.1093/jxb/eri215>.

Hermans, C., Johnson, G. N., Strasser, R. J., & Verbruggen, N. (2004). Physiological characterization of magnesium deficiency in sugar beet: acclimation to low magnesium differentially affects photosystem I and II. *Planta*, 220(2), 344-355. <https://doi.org/10.1007/s00425-004-1340-4>.

Hidayat, T.C., G. Simangunsong, Eka, L. dan Iman Y.H., 2007. Pemanfaatan Berbagai Limbah Pertanian Untuk Pembenah Media Tanam Bibit Kelapa Sawit. *Jurnal Penelitian Kelapa Sawit*. 15(2).

Jezeq, M., Geifus, C. M., Bayer, A., & Muhling, K. H. (2015) Photosynthetic capacity, nutrient status, and growth of maize (*Zea mays* L.) upon MgSO<sub>4</sub> leaf-application, *Frontiers in Plant Science*, 5, 781. <https://doi.org/10.3389/fpls.2014.00781>.

Kobayashi, N. I., & Tanoi, K. (2015). Critical issues in the study of magnesium transport systems and magnesium deficiency symptoms in plants. *International journal of molecular sciences*, 16(9), 23076-23093.

Kochian, L.V., M.A. Piñeros, O.A. Hoekenga. 2005. The physiology, genetics and molecular biology of plant aluminum resistance and toxicity. *Plant Soil* 274: 175-195.

Lesmana, O. S., Toha, H. M., Las, I., & Suprihatno, B. (2004). Deskripsi Varietas Unggul Baru Padi. Balai Penelitian Tanaman Padi Sukamandi, 68p.

Li, Y., Liu, X. H., & Zhuang, W. M. (2001). Effect of magnesium deficiency on nitrogen metabolism of longan (*Dimocarpus longana* Lour) seedlings, *Plant Nutrition and Fertilizer Science*, 7, 218-222.

Liang, c., Xiao, W., Hao, H., Xiaoqing, L., Chao, L., Z., & Fashui, H. (2009). Effects of Mg<sup>2+</sup> on spectral characteristic and photosynthetic function of spinach photosystem II. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, 72(2) 343-347. <https://doi.org/10.1016>.

- Makarim dan Suhartatik. 2009. Morfologi Dan Fisiologi Tanaman Padi. Di dalam: Suyamto, I Nyoman Widiarta, Satoto (ed.). Padi: Inovasi Teknologi dan Ketahanan Pangan. Buku 1. LIPI Press. Jakarta. Hal. 295-330.
- Malvolta, E. (1994). Nutrient and fertilizer management in sugarcane. International Potash Institute, Switzerland.
- Marschner, H. (2012). Mineral nutrition of higher plants, third ed, Academic Press London.
- Mulyaningsih, E. S., A. Y. Perdani, S. Indrayani, dan Suwarno. 2016. Seleksi Fenotipe Populasi Padi Gogo untuk Hasil Tinggi, Toleran Aluminium dan Tahan Blas pada Tanah Masam. Balai Besar Penelitian Tanaman Padi. Jl. Muara Bogor, Jawa Barat, Indonesia
- Mulyaningsih, E.S., A.Y. Perdani, S. Indrayani, Suwarno. 2016. Seleksi fenotipe populasi padi gogo untuk hasil tinggi, toleran aluminium dan tahan blas pada tanah masam. J. Penelitian Pertanian Tanaman Pangan 35:191-197.
- Nissim-Levi, A., Ovadia, R., Forer, I., & Oren-Shamir, M. (2007). Increased anthocyanin accumulation in ornamental plants due to magnesium treatment. *The Journal of Horticultural Science and Biotechnology*, 82(3), 481-487. <https://doi.org/10.1080/14620316.2007.11512262>.
- Patti, A., Gennari, L., Merlotti, D., Dotta, F., & Nuti, R. (2013). Endocrine actions of osteocalcin. *International journal of endocrinology*, 2013.
- Pusat Penelitian dan Pengembangan Tanah dan Agroklimat. 2001. Atlas Arah Tata Ruang Pertanian Indonesia Skala 1:1.000.000. Puslitbangtanak. Bogor. Indonesia. 37 hal.
- Putra, E.T.S. 2011. Weak neck problem in *Musa* sp. cv. rastali populations in relation to magnesium, boron and silicon availability. Disertasi. Faculty of Agriculture, University Putra Malaysia, Malaysia
- Rahayu, I. 2012. Manfaat unsur K pada Tanaman. Diambil dari <http://indahrahayu7.blogspot.com/2012/09/manfaat-unsur-k-padatanaman.html> pada hari jumat 15 Mei 2015 dan dicek-akses kembali: Jumat 29 April 2016.
- Ritawati, Sri, N, Dewi F, dan Fitriani. 2015. Changes in Soil Moisture Content and Yield of Several Peanut Varieties *Arachis hypogaea* L. were Given Drip Irrigation in Dry Land. Sultan Ageng Tirtayasa University: Banten
- SERAS. (1994). Standart operating procedures: plant biomass determination Scientific Engineering Response and Analytical services, 1-5p.
- Shabala, S., & Hariadi, Y. (2005). Effects of magnesium availability on the activity of plasma membrane ion transporters and light-induced responses from broad bean leaf mesophyll *Planta*, 221(1), 56-65. <https://doi.org/10.1007/s00425-004-1425-0>.

- Shacked –Sachry, L., D., Reuvani, M., Nissim-levi, A., & Oren-shamir & Oren-shamir M. (2002). Increased anthocyanin in aster flower at elevated temperatures due to magnesium treatment. *Physiologia plantarum*, 114(4), 559-556. <https://doi.org/10.1034/j.339-3054.2002.1140408>.
- Shon, T. K., Haryanto, T. A. D., & Yoshida, T. (1997), Dry matter production and utilization of solar energy in one year old *Bupleurum falcatum*. *Journal Faculty of Agriculture Kyushu University*, 41, 133-140.
- Suhartini, T. 2010. Pertumbuhan akar dua puluh genotipe padi gogo pada kahat fosfor dan cekaman aluminium. *Berita Biologi* 10(3):375-383.
- Sun, X., Kay, A. D., Kang, H., Small, G. E., Liu, G., Zhou, X., Yin, S., & Liu, C. (2013), Correlated biogeographic variation of magnesium across trophic levels in a terrestrial food chain. *PLoS One*, 8(11), e78444. <https://doi.org/10.1371/journal.pone.0078444>.
- Suriansyah, Suparman, Bhermana, A., Anto, A., 2013. Pengelolaan Tanaman Terpadu (PTT) Padi Gogo. Badan Penelitian dan Pengembangan Pertanian. Balai Pengkajian Teknologi Pertanian. Kalimantan Tengah
- Sutedjo, M. M., & Kartasapoetra, A. G. (2002). Pengantar ilmu tanah.
- Suwito, Tj. 2005. Status pembentukan varietas padi unggul untuk lahan sub optimal. Disampaikan pada Lokakarya Jaringan Penelitian Pemuliaan Partisipatif. Sukamandi, 12-13 Desember 2005. Balai Penelitian Tanaman Padi, Badan Litbang Pertanian.
- Taufiq, A. dan H. Kuntastuti. 2004. Upaya peningkatan produktivitas kedelai di lahan masam Sumatera Selatan. Pros. Lokakarya Pengembangan Kedelai melalui PTT di Lahan Kering Masam Palembang 9 Desember 2004. BPTP Sumatera Selatan. Hal. 23–33
- Van Scholl, L. & R. Nieuwenhuis. 2004. Soil fertility management 4 th eds.. Agrodok 2. Agromisa Foundation, Wageningen. ISBN: 90-77073-03-5. 82hal.
- Wang, L., Chen, L., Guo, B., Tsang, D. C., Huang, L., Ok, Y. S., & Mechtcherine, V. (2020). Red mud-enhanced magnesium phosphate cement for remediation of Pb and As contaminated soil. *Journal of hazardous materials*, 400, 123317.
- Weil, R.R., and Nyle C. Brady. 2017. *The Nature and Properties of Soils Fifteenth Edition*. Global Edition. Pearson.
- Wibowo. P. 2010. Pertumbuhan dan Produktivitas Galur Harapan Padi (*Oryza sativa* L) Hibrida di Desa Ketaon Kecamatan Banyudono Boyolali. Skripsi. Universitas Sebelas Maret. Surakarta

- Xu, L.M., C. Liu, B.M. Cui, N. Wang, Z. Zhao, L.N. Zhou, K.F. Huang, J.Z. Ding, H.M. Du, W. Jiang, S.Z. Zhang. 2018. Transcriptomic responses to aluminum (Al) stress in maize. *J. Integr. Agric.* 17:1946-1958.
- Yang, Z.B., D. Eticha, A. Albacete, I.M. Rao, T. Roitsch, W.J. Horst. 2012. Physiological and molecular analysis of the interaction between aluminium toxicity and drought stress in common bean (*Phaseolus vulgaris*). *J. Exp. Bot.* 63:3109-3125.
- Yin, S., Ze, Y., Liu, C., Li, N., Zhou, M., Duan, Y., & Hong, F. (2009). Ceriumrelieves the inhibition of nitrogen metabolis of spinach caused bymagnesium deficiency. *Biological Trace Element Research*, 132(1-3), 247-258. <https://doi.org/10.1007/s12011-009-8392-z>.
- Ze, Y., Yin, S., Ji, Z., Luo, L., Liu, C., & Hong, F. (2009). Influences of magnesium deficiency and cerium on antioxidant system of spinach chloroplasts. *Biometals*, 22(6), 941. <https://doi.org/10.1007/s10534-009-9246-z>.