

## DAFTAR PUSTAKA

- Acquaah G. 2007. *Principles of Plant Genetiks and Breeding*. Blackwell. United Kingdom.
- A.E. Nel, L. Mädler, D. Velegol, T. Xia, E.M. Hoek, P. Somasundaran, F. Klaessig, V. Castranova, M. Thompson, Understanding biophysicochemical interactions at the nano–bio interface, *Nat. Mater.* 8 (2009) 543–557.
- A. Krisnawati dan Adie. 2007. *Biologi Tanaman Kedelai*. Balai Penelitian Kacang-kacangan dan Umbi-umbian (BALITKABI). Malang.
- Adisarwanto. 2014. *Kedelai Tropika Produktivitas 3 ton/ha*, Jakarta : Penebar Swa daya.
- Alloway, BJ (2008). Seng dalam Nutrisi Tanah dan Tanaman, Edisi ke-2. (Brussel: IZA dan IFA), hlm. 23–26.
- Balittan. 2009. *Analisis Kimia Tanah, Tanaman, Air, dan Pupuk*. Balai Penelitian dan Pengembangan Pertanian, Bogor.
- Binarta Purba Marpaung, Sarifuddin. 2017. Klasifikasi Tanah Di Kecamatan Lumbanjulu Kabupaten Toba Samosir Berdasarkan Keys To Soil Taxonomy 2014. *Jurnal Agroekoteknologi FP USU* (5) 1: 120- 130.
- B. R. Shreve, P. A. Moore Jr., T. C. Daniel, D. R. Edwards, D. M. Miller. Reduction of Phosphorus in Runoff from Field-Applied Poultry Litter Using Chemical. 1995.
- Broadley, M.R., White, P.J., Hammond, J.P., Zelko, I., Lux, A., 2007. Zinc in plants: Tansley review. *New Phytol.* 173, 677–702. <https://doi.org/10.1111/j.1469-8137.2007.01996.x>.
- Busman, L., J. Lamb, G. Randall, G. Rehm and M. Schmitt, 2002. The Nature Of Phosphorus In Soils .Regents of the University of Minnesota.
- Cakmak, I. & E. Engles. 1999. Role of Mineral Nutrient in Photosynthesis and Yield Formation. In *Mineral Nutritionof Crops Fundamentals Mechanism and Implication*. Rengel, Z. Food Production Press, New York. pp. 205-223.
- Carter, J. L. & E. E. Hartwig. 1962. The management of soybean. *Adv. Agron.* 14: 359–412.
- Dang, YP., R.C. Dalal, D.G.Edward and K.G. Tiller. 1994. Kinetics of Zinc Desorption from Vertisols. *Soil Sci. Amer. J.* 58:1392-1399. <https://doi.org/10.2136/sssaj1994.03615995005800050016x>.
- Das SK. 2013. Mode of action of pesticides and the novel trends-a critical review. *International Research Journal of AgricultuRAKL Science and Soil Science* 3(11):393-403. Solomons NW and Cousins R (1984) Zinc. P. 125-197. In N.

Solomons and I. Rosenberg (ed.) Absorption and malabsorption of mineRAKL nutrients. Alan R. Liss, New York.

Dwiputra, A.H., D. Indradewa dan E.T. Susila. 2015. Hubungan Komponen Hasil dan Hasil Tiga Belas Kultivar Kedelai (*Glycine max* (L.) Merr.). *Vegetalika* 4 (3) : 14-28.

FAO. 1974. Soil Map of The World. Vol. 1. Legend. UNESCO. Paris.

Firmansyah, M.A., Nugroho, W.A., dan Suparman. (2018). Pengaruh varietas dan paket pemupukan pada fase produktif terhadap kualitas melon (*Cucumis melo* L.) di quartzipsamments. *J. Hort. Indonesia*, 9(2): 93 - 102.

Gentili, R., R. Ambrosini, C. Montagnani, S. Caronni & S. Citterio. 2018. Effect of Soil pH on the 487 Growth, Reproductive Investment and Pollen Allergenicity of *Ambrosia artemisiifolia* L. *Front. Plant Sci.* 488 9: 1335.

Hafeez, R., T. Aziz, M. Farooq, A. Wakeel, and Z. Rengel. 2012. Zinc Nutrition in Rice Production Systems: a Review. *J. Plant Soil.* 361:203-226.

Huang, H., K.Wang, Z. Zhu, T. Li, Z. He, X. Yang, D.K. Gupta. 2013. Moderate Phosphorus Application Enhances Zn Mobility And Uptake In Hyperaccumulator *Sedum Alfredii*. Zhejiang University. *J. Environn Sci Pollut Res.* Vol 20 (2844-2853).

Harfiah. 2005. Penentuan nilai index beberapa pakan hijauan ternak domba. *J. Sains dan Tenologi*: 5(3).

Havlin John L, Tisdale Samuel L, Beaton James D, Nelsob Werner L. 2013. Soil fertility and fertiluzers an introduction to Nutrient Management. Seventh Edition. Hal. 262

Hockema, B.R.,and E.Echeverria. 2000. Factors involved in soluble solids accumulation in citrus fruits. *Proc.Fla.State Hort.Soc.*113:126-130.

Huang, H., K.Wang, Z. Zhu, T. Li, Z.He, X. Yang, D.K.Gupta. 2013. Moderate Phosphorus Application Enhances Zn Mobility And Uptake In Hyperaccumulator *Sedum Alfredii*. Zhejiang University. *J. Environn Sci Pollut Res.* Vol 20 (2844-2853).

IRRI. 1971. Annual Report. Los Banos, Philippines.

Jiang, W., P. C. Struik, J. Lingna, H.V. Keulen, Z. Ming, and T. J. Stomph. 2007. Uptake and Distribution of Root Applied or Foliar Applied Zn after Flowering in Aerobic Rice. *J. Ann. Appl. Biol.* 150 : 383-391.

Karathanasis, A. D. 1999. Subsurface migration of copper and zinc mediated by soil colloid. *Soil. Sci. Soc. Amer. J.* 63:830-838.

Ketaren, Samuel E, Posma Marbun, Purba Marpaung. 2014. *Klasifikasi Inceptisol Pada Ketinggian Tempat yang Berbeda di Kecamatan Lintong Nihuta Kabupaten Hasundutan*. *Jurnal Online Agroekoteknologi* (2) 4: 1451 – 1458.

- Larry M. Shuman. 1999. Organic Waste Amendments Effect on Zinc Fractions of Two Soils.
- Marschner, H. 1995. Mineral nutrition of Higher Plants. 2nd Edition. Academic Press, London, U.K.
- Maryamah, L.S. 2010. Pengaruh kepadatan tanah terhadap sifat fisik tanah dan perkecambahan benih kacang tanah dan kedelai. Tesis. Fakultas Pertanian Institut Pertanian Bogor. Bogor.
- Mengel, K and E.A. Kirkby. 1987. Principles of Plants Nutrition. Inter. Potash Institute – Bern, Switzerland.p.687
- Malundo, T.M.M., R.L.Shewfelt and J.W.Scott. 1995. Flavor quality of fresh tomato (*Lycopersicon esculentum* Mill.) as affected by sugar and acid levels. *Postharvest Bio.and Tech.* 6:103-110.
- M. Iqbal, G. Murtaza, S. M. Mehdi, T. Naz, Atique-ur-Rehman Atique-ur-Rehman, O. Farooq, M. Ali, M. Sabir, M. Ashraf, G. Sarwar, G. Laing . 2017. Evaluation Of Phosphorus and Zinc Interaction Effects On Wheat Grown In Saline-Sodic Soil. <https://DOI:10.21162/PAKJAS/17.4983>.
- Min Luo, Wenfeng Zhu, Jiafang Huang, Yuxiu Liu, Xun Duan, Jie Wu, Chuan Tong <sup>a</sup>  
<sup>c</sup>Anaerobic organic carbon mineralization in tidal wetlands along a low-level salinity gradient of a subtropical estuary: Rates, pathways, and controls. *Volume 337, 1 March 2019, Pages 1245-1257.* <https://doi.org/10.1016/j.geoderma.2018.07.030>.
- Murphy, J., Riley, J.P., 1962. A modified single solution method for the determination of phosphate in natural waters. *Anal. Chim. Acta* 27, 31–36. [https://doi.org/10.1016/S0003-2670\(00\)88444-5](https://doi.org/10.1016/S0003-2670(00)88444-5).
- Mohsen Jalali, Mahdi Jalali and Vasileios Antoniadis. 2023. The release of Cd, Cu, Fe, Mn, Ni, Pb, and Zn from clay loam and sandy loam soils under the influence of various organic amendments and low-molecular-weight organic acids, *Journal of Hazardous Materials*, (2023). <https://doi.org/10.1016/j.jhazmat.2023.132111>.
- Mortvedt, J. J., P. M. Giordano, and W. L. Lindsay. 1972. Micronutrient in Agriculture. *Soil. Sci. Soc. Amer. Publ.* p: 243-261.
- Moreno, M.T., Carmona, E., Santiago, A., Ordovás, J., Delgado, A., 2015. Olive husk compost improves the quality of intensively cultivated agricultural soils. *Land Degrad. Dev.* 27, 449–459. <https://doi.org/10.1002/ldr.2410>.
- Misra, A. and G. Tyler. 1999. Influence of soil moisture on soil solution chemistry and concentrations of minerals in the *Calceolus phleum phleoides* and *Veronica spicata* grown on a limestone soil. *Annals of Botany* 84: 401-410.
- Munir, M. 1996. Tanah-Tanah Utama Indonesia: Karakteristik, Klasifikasi, dan Pemanfaatannya. Pustaka Jaya: Jakarta. 346.

- Nasa Power Prediction of Worldwide Energy Resource. 2023. <https://power.larc.nasa.gov/>. 530 accessed 27 Juni 2023.
- Nunun Barunawati., 2012. *Iron and Zinc Translocation from Senescent Leaves to Grains of Wheat (Triticum aestivum cv. Akteur) in Response to Nitrogen Fertilization and Citric Acid Application*. Disertasi. Universtas Halle Wittenberg.
- Olsen, S.R., Cole, C.V. and Watanabe, F.S. (1954) Estimation of Available Phosphorus in Soils by Extraction with Sodium Bicarbonate. USDA Circular No. 939, US Government Printing Office, Washington DC.
- Petijo dan Setijo. 2003. *Seri Penangkaran: Benih Kedelai*. Kanisius. Yogyakarta.
- Ramadani, T., Jumini, dan Nurhayati. (2022). Pengaruh Dosis Kompos dan KNO<sub>3</sub> Terhadap Pertumbuhan dan Hasil Tanaman Melon (*Cucumis melo* L.). Jurnal Ilmiah Mahasiswa Pertanian, 7(1): 1-8.
- Rehim, A., M. Zafar, M. Imran, M.A. Ali dan M. Hussain. 2014. Phosphorus and zinc application improves rice productivity. Department of Soil Science, Bahauddin Zakariya University Multan, Pakistan. J.soil. sci. Vol 2.
- Resman, A., S Syamsul, dan Bambang, H.S. 2006. *Kajian beberapa sifat kimia dan fisika Inceptisol pada toposekuen lereng selatan gunung merapi kabupaten sleman*. Jurnal Ilmu Tanah dan Lingkungan. Vol. 6 (2) : 101-108.
- Riyadi, H. 2007. Zinc (Zn) untuk Pertumbuhan dan Perkembangan Anak. Departemen Gizi Masyarakat. IPB.
- Riyanto Damasus. 2015. *Peranan Pupuk Sp-36, Mineral Zeolit, Bakteri Pelarut Fosfat dan Arang Sekam Terhadap Hasil Dan Kadar Bahan Aktif Asiatikosida Tanaman Pegagan (Centella Asiatica L.Urban) Di Inceptisol Lereng Selatan Merapi*. Disertasi Program Studi Ilmu Pertanian Universitas Gadjah Mada 2015.
- Rija Sudirja, M. Amir Solihin, dan Santi Rosniawaty. 2007. *Respons Beberapa Sifat Kimia Fluventic Eutrudepts Melalui Pendayagunaan Limbah Kakao Dan Berbagai Jenis Pupuk Organik*. SoilREns Vol.8 No.16 Desember 2007.
- Salisbury, F.B dan C.W. Ross. 1992. Fisiologi Tumbuhan Jilid Tiga Edisi Keempat. Penerbit ITB – Bandung.
- Sasaki, H., T. Hirose, Y. Watanabe and R. Ohsugi. 1998. Carbonic anhydrase activity and CO<sub>2</sub>-transfer resistance in Zn-deficient rice leaves. Plant Physiology 118: 929-934.
- Setyorini, D., L.R. Widowati, dan S. Rochayati. 2004. Teknologi Pengelolaan Hara Tanah Sawah Intensifikasi. Dalam Tanah Sawah dan Teknologi Pengelolaannya. Ed. Agus, F., A. Adimihardja, S. Hardjowigeno, A.M. Fagi, dan W. Hartatik. Pusat Penelitian dan Pengembangan Tanah dan Agroklimat. Hlm.137-168.

- Sillanpaa, M. 1972. Trace elements in soil and agriculture. *FAO Soil Bulletin* (17): 41-44.
- Sitompul, S.M dan B. Guritno, 1995. Analisis Pertumbuhan Tanaman. Gadjah Mada University Press, Yogyakarta.
- Soil Survey Staff. 2010. *Soil Taxonomy a Basic System of Soil Classification for Making and Interpreting Soil Surveys Eleventh Edition*. United States Department of Agriculture. Washington DC. 754 hal.
- Staton, D. A. and R. D. T. Burger. 1987. Vailability to Plant of Zinc Sorbed by Soil and Hidrous Iron Oxide. *Geoderma* I.
- Setyorini, Diah. 2008. Persyaratan mutu pupuk organik untuk menunjang budidaya pertanian organik. Disampaikan pada Seminar Sehari Penggunaan Pupuk Organik. BPTP di Yogyakarta.
- Setyorini , D., LR Widowati , and S. Rochayati . 2004. Technology Paddy Soil Nutrient Management Intensification. In *Paddy Land And Technology Management*. Ed. Agus , F., A. Adimihardja , S. Hardjowigeno , AM Fagi , and W. Hartatik . Center Study And Land Development and Agroclimate. P.137–168.
- Silva Mendes, J. , Garófalo Chaves, L. , Brito Chaves, I. , Santos e Silva, F. and Fernandes, J. (2015) Using Poultry Litter Biochar and Rock Dust MB-4 on Release Available Phosphorus to Soils. *Agricultural Sciences*, 6, 1367-1374.
- Suryanti, S. 2015. Correlation between root properties, physiological properties, and responses 553 to microphones in soybean cultivation with the resistance level to drought stress. Dissertation. 554 Universitas Gadjah Mada, Yogyakarta. [in Indonesian].
- Subardja, D., Ritung, S., Anda, M., Sukarman, Suryani, E., and Subandiono, R.E. 2014. Petunjuk Teknis Klasifikasi Tanah Nasional. Balai Besar Penelitian dan Pengembangan Sumberdaya Lahan Pertanian, Badan Penelitian dan Pengembangan Pertanian. Bogor.
- Sumarno & A.G. Manshuri. 2007. Persyaratan tumbuh dan wilayah produksi kedelai di Indonesia. Balai Penelitian Tanaman Kacang-kacangan dan Umbi-umbian, Malang.
- Suryana, A. 2012. Pengaruh Waktu Aplikasi dan Dosis Pupuk Majemuk NPK pada Pertumbuhan dan Hasil Kedelai Varietas Grobogan. (Skripsi). Universitas Lampung. Bandar Lampung. 93 hlm.
- Tewari, P. Kumar, P.N. Sharma. 2008. Morphology and physiology of zinc-stressed mulberry plants. *Journal of Plant Nutrition and Soil Science*.
- Tisdale, S.J., W.L, Nelson and J.D. Beaton. 1985. *Soils and Soil Fertility*. Mc Grow Hill Book. CO. New York.
- Umaternate, G.R., J.Abidjulu, A.D.Wuntu. 2014. Uji Metode Olsen dan Bray dalam Menganalisis Kandungan Fosfat Tersedia pada Tanah Sawah di Desa

Konarom Barat Kecamatan Dumoga Utara. Unsrat. Manado. J.Mipa.Unsrat. Vol 3(1).

- Obata H., S. Kawamura., K. Senoo, and A. Tanaka. 1999. *Change in the Level of Protein and Activity Of Cu/Zn-Superoxide Dismutase in Zinc Sources Applied to a Calcareous Soil*. Soil Sci. Soc. Amer. J. 67:564-572
- Ozturk L, Yazici MA, Yucel C, Torun A, Cekic C, Bagci A, Ozkan H, Braun HJ, Sayers Z and Cakmak I (2006). *Concentration and localization of zinc during seed development and germination in wheat*. Physiologia Plantarum, 128:144–152.
- Yang, X.-E., Chen, W.-R., Feng, Y., 2007. Improving human micronutrient nutrition through biofortification in the soil–plant system: China as a case study. Environ. Geochem. Health 29, 413–428.
- Yullianida dan G.W.A. Susanto. 2007. Karakteristik shasil galur-galur kedelai umur genjah, hlm 77–87. Dalam: Suharsono, A.K. Makarim, A.A. Rah-mianna, M.M. Adie, A. Taufiq, F. Rozi, I.K. Tastra, dan D. Harnowo (Eds.). Peningkatan Produksi Kacang-kacangan dan Umbi-umbian Mendukung Kemandirian Penelitian dan Pengembangan Per-tanian. Bogor.
- Zhan, J., Twardowska, I., Wang, SQ, Wei, SH, Chen, YQ, Ljupco, M., 2019. Prospective sustainable, safe food production for growing population based on soybean (Glycine et al.) crops under Cd soil contamination on stress. J. Clean. Prod. 212, 22–36. <https://doi.org/10.1016/j.jclepro.2018.11.287>.
- Zeidan, Manal F., Mohamed and H.A. Hamouda. 2010. Effect of Foliar Fertilization of Fe, Mn and Zn on Wheat Yield and Quality in Low Sandy Soils Fertility. orld Journal of Agricultural Sciences 6 (6): 696-699