

DAFTAR PUSTAKA

- Abbas, S. M. 2013. The Influence of Biostimulants on The Growth and on The Biochemic Composition of *Vicia faba* CV. Giza 3 Beans. *Romanian Biotechnological Letters*. 18(2): 8061-8068.
- Akila, N and T. Jeyadoss. 2010. The potential of seaweed liquid fertilizer on the growth and antioxidant enhancement of *Helianthus annuus* L. *Oriental Journal of Chemistry*. Vol.26(4) : 1353-1360
- Al Majathoub, M. 2004. Effect of Biostimulants on Production of Wheat (*Triticum aestivum* L.). In: Cantero-Martinez C. (ed.), Gabina D. (ed.). Mediterranean rainfed agriculture: Strategies for sustainability. Zaragoza: CIHEAM 147-150.
- Alkhafaji, B.Y., H. R. Malih and R. J. Elkheralla. 2019. Effect of fertilization by Cladophora algae on morphological characteristics of *Vigna radiate* & *Sesamum indicum* plants. *Journal of Physics : Conf. Series* 1294: 072024.
- Ardiansyah, M dan Yomin. 2014. A Comparison of Rice Productivity Data Between Post-Harvest Interview and Ubinan Survey in Central Kalimantan. *Penelitian Pertanian Tanaman Pangan* Vol. 3 (1) : 17-22
- Arnon, D. 1949. Copper enzymes isolated chloroplasts, polyphenoloxidase in *Beta vulgaris*. *Plant Physiology*. 24: 1-15.
- Aryani, N., K. Hendarto, D. Wiharso, A. Niswati. 2019. Peningkatan Produksi Bawang Merah Dan Beberapa Sifat Kimia Tanah Ultisol Akibat Aplikasi Vermikompos Dan Pupuk Pelengkap . *Journal of Tropical Upland Resources*. Vol. 01 (1): 145-160
- Badan Pusat Statistik. 2019. *Data Produksi Tanaman Pangan*. Pusat Data Statistik Pertanian. Jakarta.
- Balai Besar Penelitian Tanaman Padi. 2017. *Tiga Fase Pertumbuhan Padi*. Balai Besar Penelitian Tanaman Padi Kementerian Pertanian Maret 2017.
- Basavaraja, P.K., N. D. Yogendra, S. T. Zodape, R. Prakash dan A. Ghosh. 2018. Effect of seaweed sap as foliar spray on growth and yield of hybrid maize. *Journal of Plant Nutrition*. 1532-4087.
- Bellinger, E. G and D.C. Sigeo . 2010. *Freshwater Algae: Identification and Use as Bioindicators*. John Wiley & Sons, Ltd.

- Bozorgi, H. R. 2012. Effects Of Foliar Spraying With Marine Plant *Ascophyllum Nodosum Extract* And Nano Iron Chelate Fertilizer On Fruit Yield And Several Attributes Of Eggplant (*Solanum melongena* L.). *Journal of Agricultural and Biological Science*. Vol 7 (5) : 357-362
- Buntoro, B.H., R. Rogomulyo dan S. Trisnowati. 2014. The Effect of Manure Fertilizer Dosage and Light Intensity on Growth and Yield of Zedoary (*Curcuma zedoaria* L.). *Jurnal Vegetalika*. Vol 3 (4) : 29 – 39.
- Calvo, P., L. Nelson dan J.W. Kloepper. 2014. Agricultural uses of plant biostimulants. *Plant and Soil* 383(1-2): 3-41.
- Chiaese, P., G. Corrado, G. Colla, M. C. Kyriacou, Y. Roupael. 2018. Renewable Source Of Plant Biostimulation : Microalgae as a Sustainable Means to Improve Crop Performance. *Frontiers In Plant Science Mini Review*. Vol 9 : 1782
- Djaenudin, U. D. 2009. Prospek Penelitian Potensi Sumber Daya Lahan di Wilayah Indonesia. *Pengembangan Informasi Pertanian* 2(4): 243-257.
- Du Jardin, P. 2015. Plant Biostimulants: Definition, Concept, Main Categories and Regulation. *Scientia Horticulturae* 196: 3-14.
- El Sheekh MM, And El Saled A el D. 2000. Effect Of Crude Seaweed Ectracts On Seed Germination, Seedling Growth And Some Metabolic Processed Of *Vicia Faba* L. *CYTOBIOS* 101(396): 23-35.
- Fabrowska, J., B. Leska, G. Schroeder, B. Messyas, and M. Pikosz. 2015. *Marine Algae Extracts: Processes, Products, and Applications, First Edition*. Chapter 38: Biomass and Extracts of Algae as Material for Cosmetics. Edited by S.K. Kim and K. Chojnacka. Wiley-VCH Verlag GmbH & Co. KgaA: 681-706.
- Ferrante, A., L. Incrocci, R. Maggini, G. Serra dan F. Tognoni, 2004. Colour Changes of Fresh-cut Leafy Vegetables during Storage. *J. Food, Agri. and Environ.* 2(3&4): 40-44.
- Firmansyah. 2011. *Hubungan Penguasaan Lahan Sawah dengan Pendapatan Usaha tani Padi (Studi Kasus Kelompok Tani Harum IV Kelurahan Situmekar, Kecamatan Lembursitu, Kota Sukabumi)*. IPB. Bogor.
- Fitria, E dan M. N. Ali. 2014. Kelayakan Usaha Tani Padi Gogo Dengan Pola Pengelolaan Tanaman Terpadu (Ptt) Di Kabupaten Aceh Besar, Provinsi Aceh The Feasibility Of Upland Rice Farming With Integrated Crop Management (Icm) In Aceh Besar, Aceh. *Widyariset*, Vol. 17 (3) : 425–434

- Fitriatin, B. N., A. Yuniarti., T. Turmuktini., dan F. K. Ruswandi. 2014. The Effect of Phosphate Solubilizing Microbe Producing Growth Regulators on Soil Phosphate, Growth and Yield of Maize and Fertilizer Efficiency on Ultisol. *Eurasian J. of Soil Sci. Indonesia*. P :101-107
- Gamal , S. M. A., and H. M. I. Ahmed. 2016. Response of Dill (*Anethum graveoloens* Linn.) to Seaweed and Moringa Leaf Extracts Foliar Application under Different Sowing Dates. *Alex. J. Agric. Sci.* Vol. 61 (5) : 469-485
- Gardner, F. P., R. B. Pearce, dan R. L. Mitchell, 1991. *Fisiologi Tanaman Budidaya*. University of Indonesia Press. Jakarta.
- Grabowska, A., E. Kunicki, A. Sekara dan A. Kalisz. 2012. The Effect of Cultivar and Biostimulant Treatment on The Carrot Yield and Its Quality. *Vegetable Crops Research Bulletin*. 77: 37-48
- Gusnidar, A. Fitri, dan S. Yasin. 2019. Titonia Dan Jerami Padi Yang Dikomposkan Terhadap Ciri Kimia Tanah Dan Produksi Jagung Pada Ultisol. *J. Solum*. Vol. XVI (1) : 11-18
- Hafif, B. 2016. Optimasi Potensi Lahan Kering Untuk Pencapaian Target Peningkatan Produksi Padi Satu Juta Ton Di Provinsi Lampung. *Jurnal Litbang Pertanian*. Vol 35 (2) : 81-88
- Harjanti, R.A., S. Nuryani, H. Utami. 2014. Pengaruh Takaran Pupuk Nitrogen dan Silika terhadap Pertumbuhan Awal (*Saccharum officinarum* L.) pada Inceptisol. *Jurnal Vegetalika*. 3(2):35-44.
- Hartono, R., R. Wirosoedarmo dan L. D. Susanawati. 2013. Pengaruh Teknik dan Dosis Pemberian Pupuk Organik dari Sludge biodigester terhadap Produksi Tanaman Jagung (*Zea mays* L.) Varietas Bima. *Jurnal Sumber Daya Alam dan Lingkungan*. Fakultas Teknologi Pertanian Universitas Brawijaya. Malang.
- Hendriyani, I.S., Y. Nurchayati, dan N. Setiari. 2018. Kandungan klorofil dan karotenoid Kacang Tunggak (*Vigna unguiculata* (L.) Walp.) pada umur tanaman yang berbeda. *Jurnal Biologi Tropika*, Vol. 1 (2) : 38-43
- Kalaivanan, C., M. Chandrasekaran dan V. Venkatesalu. 2012. Effect of Seaweed Liquid Extract of *Caulerpa scalpelliformis* on Growth and Biochemical Constituents of Black gram (*Vigna radiate* (L.) Hepper). *Phykos* 42(2): 46-53.
- Karo, K. A., A. Lubis, dan Fauzi. 2017. Some Changes in Chemical Properties on Ultisol Soil Giving Due Some of Organic Fertilizer and The Incubation Period. *Jurnal Agroekoteknologi FP USU*. Vol 5 (2) : 277- 283

- Kavipriya, R. dan T. Nallamuthu. 2012. Effect of Seaweed Liquid Fertilizers on The Biostimulan on Early Seed Germination and Growth Parameters of *Oryza sativa* L. Center of Advanced Studies in Botany. *INT J CURR SCI*. 3: 1520.
- Khan, W., U.P Rayirath, S. Subramanian, M.N. Jithesh, P. Rayorath, D.M. Hodges, A. T. Critchley, J. S. Craigie, J. Norrie dan B.Prithiviraj. 2009. Seaweed Extracts as Biostimulants of Plant Growth and Development. *J Plant Growth Regul*. Vol 28 : 386–399.
- Koffi, T. K, Dr. S. Kumar, and D.H. Sur. 2018. Extraction of Plant Nutrients from Freshwater Algae and their Role in Sustainable Agriculture. *International Journal of Current Biotechnology* 6(4):1-8.
- Lina W, Xiaoyu Y, Zhonghai R, Xiufeng W. 2014. Regulation of Photoassimilate Distribution between Source and Sink Organs of Crops through Light Environment Control in Greenhouse. *Agric. Science* 5(4) 250-256.
- Makarim, A dan E. Suhartik. 2010. Budidaya Padi dengan Masukan In-Situ Menuju Perpadian Masa Depan. *Iptek Tanaman Pangan* 2(1):19-29
- Mancuso, S. Azzarello, E., Mugnai, S. and Briand, X. 2006. Marine bioactive substances (IPA extract) improve foliar ion uptake and water tolerance in potted *Vitis vinifera* plants. *Adv. Horticul. Sci.* 20:156161.
- Messyaz, B, Boguslaw L., Joanna F., Marta P., Edward R., Adam C., and Grzegorz S. 2015. Biomass of freshwater *Cladophora* as a raw material for agriculture and the cosmetic industry. *Research Article*. 13: 1108–1118
- Munira, M, Rahmatullah Q, Muhammadi B, And Arshad M.K. 2019. Pharmaceutical aptitude of *Cladophora*: A comprehensive review. *Review article Algal Research*. 39 (2019) 101476 : 1- 10.
- Nemati, I., F. Moradi, S. Gholizadeh, M.A. Esmaeili, M.R. Bihamta. 2011. The effect of salinity stress on ions and soluble sugars distribution in leaves, leaf sheaths and roots of rice (*Oryza sativa* L.) seedlings. *Plant Soil Environ*. 57: 2633.
- Neveux, N., A.K.L. Yuen, C. Jazrawi, M. Magnuson, B.S. Haynes, and R. De. Nys. 2014. Biocrude Yield And Productivity From The Hydrothermal Liquefaction Of Marine And Freshwater Green Macroalgae. *Bioresources Technology*. 155 : 334-341.

- Nio, S. A. 2011. Biomasa dan Kandungan Klorofil Total Daun Jahe (*Zingiber officinale* L.) yang Mengalami Cekaman Kekeringan. *Jurnal Ilmiah SAINS*. 2 (11) :190-195.
- Noli, Z.A, Mansyurdin dan R. Cahyani. 2019. Aplikasi Ekstrak Makroalga *Cladophora* sp Sebagai Biostimulan Untuk Peningkatan Pertumbuhan Dan Produksi Padi Gogo (*Oryza sativa* L) Pada Lahan Suboptimal. *Laporan Hibah MIPA Universitas Andalas*. Padang.
- Norra, I., A. Aminah dan R. Suri. 2016. Effects of drying methods, solvent extraction and particle size of Malaysian brown seaweed, *Sargassum* sp. on the total phenolic and free radical scavenging activity. *International Food Research Journal*. 23(4):1558-1563.
- Novita, N., N. Soverda, dan Gusniwati. 2012. *The Effect Of Shade On Chlorophyll Content And The Yield Of Two Soybean Varieties (Glycine max L. Merrill)*. Program Studi Agroekoteknologi, Fakultas Pertanian Universitas Jambi. Vol 1 (3) : 188-196.
- Oktavia, Reza. 2019. Pengaruh Formulasi Dan Frekuensi Pemberian Ekstrak Padina minor Yamada Terhadap Perkecambahan Dan Pertumbuhan Tanaman Padi Gogo (*Oryza sativa* L.). *Skripsi*. Jurusan Biologi FMIPA, Universitas Andalas. Padang.
- Parman, S.. 2015. *Pengaruh Pemberian Giberelin pada Pertumbuhan Rumpun Padi Ir-64 (Oryza Sativa Var Ir- 64)*. Fakultas Sains dan Matematika Universitas Diponegoro.
- Perdana, A. S. 2016. *Budidaya Padi Gogo*. Mahasiswa Swadaya Penyuluhan dan Komunikasi Pertanian. UGM. Yogyakarta.
- Pramanick, B., Bramachari, K., Ghosh A. and Zodape, S.T. 2014. Effect of seaweed saps on growth and yield improvement of transplanted rice in old alluvial soil of West Bengal. *Bangladesh Journal of Botany* 43(1): 53–58.
- Prasetyo, B. H dan D. A. Suriadikarta. 2006. Karakteristik , Potensi, dan Teknologi Pengelolaan Tanah Ultisol Untuk Pengembangan Pertanian Lahan Kering di Indonesia. *J. Litbang Pertanian*. Bogor.
- Pratama, A. J., A.N. Laily. 2015. *Analysis of Chlorophyll Content of Gandasuli Leaves (Hedychium gardnerianum Shephardex Ker-Gawl) at Three Different Development Areas*. Universitas Islam Negeri Maulana Malik Ibrahim. Malang.

- Ramya, S.S., N. Vijayanand dan S. Rathinavel. 2015. Foliar application of liquid biofertilizer of brown alga *Stoechospermum marginatum* on growth, biochemical and yield of *Solanum melongena*. *Int J Recycl Org Waste Agricult*. Vol 4:167–173
- Rathore, S.S., D.R. Chaudhary, G.N. Boricha, A. Ghosh, B.P. Bhatt, S.T. Zodape and J.S. Patolia. 2008. Effect of seaweed extract on the growth, yield and nutrient uptake of soybean (*Glycine max*) under rainfed conditions. *South African Journal of Botany* 75 : 351–355.
- Rotundo, A., M. Forlani and C. dan Di Vaio. 2004. *Influence of Shading Net Vegetative and Productive Characteristics, Gas Exchange and Chlorophyll Content of The Leaves in Two Blackberry (Rubus ulmifolius Schott)*. <http://www.actahort.org/books/457/457-42.html>.
- Sadimantara, Gusti Ray, dan Muhidin. 2012. Daya Hasil Beberapa Kultivar Padi Gogo Lokal Asal Sulawesi Tenggara pada Kecamatan Kekeringan. *Jurnal Agroteknos*. 2 (3):121-125.
- Sarawa Dan A. R. Baco. 2014. Partisi Fotosintat Beberapa Kultivar Kedelai (*Glycine max*. (L.) Merr.) Pada Ultisol. *Jurnal Agroteknos* Vol. 4 (3) : 152-159.
- Satapathy, B.S, K. B. Pun, T Singh and S. K. Rautaray. 2014. Effect of liquid seaweed sap on yield and economics of summer rice. *Oryza* 51(2): 131-135.
- Stickney, R.R. 2000. *Encyclopedia of aquaculture*. A wiley-interscience publication John Wiley and Sons, Inc. The United States of America, 1,063 pp.
- Suganthi, A. dan K. Sujatha. 2014. Aqueous Seaweed Sprays for Enhancement of Growth and Yield of Sunflower Hybrid CO2. *International Journal of Agriculture Innovations and Research* 2(6): 2319-1473.
- Sunarpi, A. Jupri, R. Kurnianingsih, N. I. Julisaniah and A. Nikmatullah. 2010. Effect of seaweed extracts on growth and yield of rice plants. *Bioscience* 2(2): 73-77.
- Suntoro, J. Syamsiyah dan W. Rahina. 2017. Ketersediaan dan Serapan Ca Pada Kacang Tanah di Tanah Alfisols yang Diberi Abu Vulkanik Kelud dan Pupuk Kandang. *Agrosains*. Vol. 19 (2): 51-57.
- Sutapradja, H. 2008. Pengaruh Pemangkasan Pucuk terhadap Hasil dan Kualitas Benih Lima Kultivar Mentimun. *J. Hort*. Vol 18 (1) : 16-20.
- Sutharsan, S., S. Nishanthi dan S. Srikrishnah. 2014. Effects of Foliar Application of Seaweed (*Sargassum crassifolium*) Liquid Extract on the Performance of

- Lycopersicon esculentum* Mill. In Sandy Regosol of Batticaloa District Sri Lanka. *American-Eurasian J. Agric. & Environ.* Vol 14 (12): 1386-1396.
- Swastika, D.K.S., J. Wargiono, Soejitno dan A. Hasanudin. 2007. Analisis kebijakan peningkatan produksi padi melalui efisiensi pemanfaatan lahan sawah di Indonesia. *Analisis Kebijakan Pertanian* 5(1):36-52
- Syahputra, E. 2015. Karakteristik Sifat Kimia Sub Grup Tanah Ultisol di Beberapa Wilayah Sumatera Utara. *Jurnal Agroekoteknologi* 4(1)
- Tini, E. W., A. K. Rahman dan E. Mugiastuti. 2019. Pemanfaatan Macam dan Dosis Pupuk untuk Meningkatkan Pertumbuhan dan Hasil Jambu Biji Kristal (*Psidium Guajava*). *Agrotechnology Research Journal* . Vol 3 (1): 35-41.
- Vasconcelos, A.C.F., X. Zhang, E.H. Ervin, J.de Castro Kiehl. 2009. Enzymatic Antiooxidant Responses to Biostimulant in Maize and Soybean Subjected to Drought. *Sci. Agric (Piracicaba, Braz.)* 66(3) : 395-402.
- Warohmah, M., Agus, K., dan Rugayah. 2018. Pengaruh Pemberian Dua Jenis Zat Pengatur Tumbuh Alami Terhadap Pertumbuhan Seedling Manggis (*Garcinia mangostana* L.). *Jurnal Agrotek.* Jurusan Agroteknologi Fakultas Pertanian Universitas Lampung. Lampung.
- Wher J.D, and Robert G. Sheath. 2002. *Chapter 2 freshwater habitat of algae.* Louis Calder Center Biological Station and Department of Biological Sciences Fordham University. Armonk. New York.
- Widiastuti, H., D. Santoso, S.M.Putra, M. Wiramihardja, A. Farida, B. Marahimin, K. Panjaitan dan J. Sinaga. 2013. Penggunaan Biostimulan Orgamin Untuk Defisiensi Pemupukan dan Peningkatan Produktivitas Kelapa Sawit Di Dataran Tinggi. *Jurnal Menara Perkebunan.* Vol 81 (2) : 41-48.
- Yogi, A.R. 2011. Identifikasi Varietas Padi Gogo Potensi Toleransi Kekeringan Pada Skala Laboratorium. *Agronomika* 11(11): 1-8
- Yulnafatmawita, Adrinal, dan A. F. Daulay. 2008. Pengaruh Pemberian beberapa jenis bahan organik Terhadap Stabilitas agregat Tanah Ultisol Limau Manis. *J.Solum.* Vol. V (1): 7-13
- Ziharsya, I. 2019. Analisis Kandungan Klorofil Tumbuhan Biduri (*Calotropis gigantea* L.) Berdasarkan Faktor Fisik Dan Kimia Di Kawasan Geothermal Dengan Pesisir Pantai Sebagai Pengembangan Praktikum Fisiologi Tumbuhan. *Skripsi.* Pendidikan UIN Ar Raniry. Aceh

- Zodape, S. T., A. Gupta, S. C. Bhandari. U. S. Rawat, D. R. Chaudhary, K. Eswaran and J. Chikara. 2011. Foliar Application Of Seaweed Sap As Biostimulant Fpr Enhancement Of Yield And Quality Of Tomato (*Lycopersicon esculentum* Mill.). *Journal Of Scientific and Industrial Research*. Vol 70 : 215-219
- Zulkifly, S. B., J.M. Graham, E. B. Young and R. J. Mayer. 2013. The Genus *Cladophora* KUtzing (Ulvophyceae) As A Globally Distributed Ecological Engineer. *J. Phycol.* 49: 1–17.

