

DAFTAR PUSTAKA

- Abd El-Azim, W.M., Khater, Rania M. R. and Badawy, M.Y.M. 2017. Effect of Bio-Fertilization and Different Licorice Extracts on Growth and Productivity of *Foeniculum vulgare*, Mill. Plant. *Middle East J. Agric. Res.*, 6(1): 1-12, 2017 ISSN: 2077-4605
- Abdou, A.A. El-Sayed, R.A.I. Taha, M.A. Abd-El Sayed and W.S.E. Botros. 2107 . Effect Of Compost And Some Biostimulant Treatments On Guar Plants A-Vegetative Growth And Seed Yield. *Scientific J. Flowers & Ornamental Plants*, 4(1):143-157 (2017)
- Adesoji, A.G. , I.U. Abubakar and D.A. Labe. 2015. Character Association and Path Coefficient Analysis of Maize (*Zea mays L.*) Grown under Incorporated Legumes and Nitrogen. *Journal of Agronomy* 14 (3): 158-163, 2015.
- Agren, G.I. and O. Franklin. 2003. Root: Shoot Ratios, Optimization and Nitrogen Productivity. *Annals of Botany* 92: 795-800. doi:10.1093/aob/mcg203
- Agustina,L. 2004. *Dasar Nutrisi Tanaman*. PT Rineka Cipta : Jakarta
- Aisha, H. Ali, M.R. Shafeek, Mahmoud, R. Asmaa and M. El- Desuki. 2014. Effect of Various Levels of Organic Fertilizer and Humic Acid on the Growth and Roots Quality of Turnip Plants (*Brassica rapa*). *Current Science International*, 3(1): 7-14, 2014 ISSN: 2077-4435
- Ali Q, A. Ali, M. Waseem, A. Muzaffar, S. Ahmad, S. Ali, M.F. Awan and T.R. Samiullah. 2014. Correlation analysis for morpho-physiological traits of maize (*Zea mays L.*). *Life Sci J* 2014;11(12s):9-13.
- Ali, E.F., Hassan, F.A.S., Elgimabi, M. 2018. Improving the growth, yield and volatile oil content of *Pelargonium graveolens* L. Herit by foliar applicationwith moringa leaf extract through motivating physiological and biochemical parameters. *South African Journal of Botany* 119 (2018) 383–389
- Ali-Dinar, H., M., G. Ebert and P. Ludders. 1999. Growth, Chlorophyll Content, Photoynthesis and Water Relations in Guava (*Psidium guajava L.*) under salinity and Different Nitrogen Supply. *Gartenbauwissenschaft* 64(2)
- Al-Juthery, H. W. A., N. S. Ali, D. K. A. Al-Taey and E. A. H. M. Ali. 2018. The Impact Of Foliar Application Of Nanaofertilizer, Seaweed And Hypertonic On Yield Of Potato. *Plant Archives Vol. 18 No. 2, 2018 pp. 2207-2212*
- Almaida, A. Q., Peter, H., and Rogerio, P. S. 2014. Effect of Nitrogen and Application Ways of a Plant Biostimulant on DIfferent Wheat Genotypes Contrasting in Stature. *African Journal of Agricultural Research Vol . 9 (33) pp. 2540-2545. DOI 10.5897/AJAR2014.8892*

- Alves,N. F., Sebastião F. L., Ana P. L. L., Catia A. S., Pedro P. V. D.. 2019. Biostimulant And Micronutrient Applications In The Production Of *Acacia mangium* Seedlings. *JEAI*,38(5): 1-11, 2019; Article no. JEAI.49671
- Andresen,M dan Cedergreen, N. 2010. Plant Growth Is Stimulated by Tea-seed Extract. University of Copenhagen, Department of Agriculture and Ecology. Journal of Hortscience45(12):1848–1853. 2010. Denmark.
- Arif, S.S. 2015. Influence of different growing Conditions, micronutrients and Biostimulant application on growth, Seed yield and quality of marigold (*Tagetes erecta* l.) cv arka bangara. Thesis Agriculture. University Of Agricultural Sciences. Bengaluru
- Ashraf, N., Moieza, A., Gh Hassan, Munib, U.,R., N.A, Dar, Inayat, M.K., Umar, I., and S.A. Banday. 2013. Effect of foliar application of nutrients and biostimulant on nut quality and leaf nutrient status of pecan nut cv. "Western Schley". *African Journal of Agricultural Research Vol. 8(6)*, pp. 559-563,25 February, 2013
- Asrar, Z. 2012. *Terpenoids and Gibberellic Acids Interactions in Plants*, in Advances in Selected Plant Physiology Aspects (Edited by : Guiseppe Montanaro and Bartolomeo Dichio. InTech Published. ISBN. 978-953-51-0557-2.
- Aulia, N. R. 2017. Pengaruh Ekstrak Beberapa Jenis Tumbuhan sebagai Biostimulan untuk Pertumbuhan dan Hasil Jagung (*Zea mays* L.) pada Tanah Ultisol. Tesis Pascasarjana FMIPA. Universitas Andalas Padang.
- Aulia, N. R. Zozy, A.N., dan Amri, B. dan Mansyurdin. 2018. Effect of plant Extracts on Growth and yield of maize (*Zea mays* L.). *JTAS vol. 41 (3) Aug.2018*
- Azarmi, R., Hajieghrari, B., Giglou, A., 2011. Effect of Trichoderma isolates on tomato seedling growth response and nutrient uptake. *Afr. J. Biotechnol.* 10,5850–5855.
- Badan Ketahanan Pangan Kementerian Pertanian RI. 2018. Urgensi Jagung dalam Kebutuhan Pangan. ISSN: 2615-3807
- Balai Penelitian Tanaman Serealia. 2016. *Deskripsi Varietas Unggul Jagung*. Balai Penelitian dan Pengembangan Pertanian. Maros
- Bharti, S.K., A. Bhatia, S.K. Tewari, O.P. Sidhu and R. Roy, 2011. Application of HR-MAS NMR spectroscopy for studying chemotype variations of *Withania somnifera* (L.) Dunal. *Magn. Reson. Chem.*, 49: 659-667.
- Biswas, A. K., T. S. Hoque and M.A. Abedin. 2016. Effect of Moringa Leaf Extract on Growth and Yield of Maize. *Progressive Agriculture* 27 (2)
- Black, C. and C. Ong. 2000. Utilisation of Life and Water in Tropical Agriculture. *Agriculture and Forest Meteorology* 104.

- Bodnar, K. B., M. N. M. Seyed, and N. Janos. 2018. Evaluation of dry matter accumulation of maize (*Zea mays* L.) hybrids. *Acta agraria debreceniensis* 2018/74
- Borase, C.L., Lomte, D.M., Thorat S.D., and Dhonde, A.S. 2018. Response of Kharif maize (*Zea mays* L.) to micronutrients. *Journal of Pharmacognosy and Phytochemistry* 2018; 7(3): 482-484
- Brinkhaus, B., Linder, M., Schuppan, D., and Hahn, E.G. 2000. Chemical, pharmacological and clinical profile of the East African medicinal plant *Centella asiatica*. *Phytomedicine* 2000, 7, 427–448.
- Burkil, H. 1966. *A Dictionary of the Economic Products of the Malay Peninsula*. 2nd ed. 2 volumes. Kuala Lumpur: Ministry of Agriculture and co-operatives
- Calvo, P., L. Nelson dan J.W. Kloepfer. 2014. Agricultural uses of plant biostimulants. *Plant and Soil*, 383(1-2): 3-41, DOI 10.1007/s11104-014-2131-8
- Chaicharoenpong, C., and Petsom, A. 2009. Quantitative thin layer chromatographic analysis of the saponins in *Haplophyllum tuberculatum*. *Phytochem. Anal.* 20:253–255.
- Chaurasiya, N.D., R.S. Sangwan, L.N. Misra, R. Tuli and N.S. Sangwan, 2009. Metabolic clustering of a core collection of Indian ginseng *Withania somnifera* Dunal through DNA, isoenzyme, polypeptide and withanolide profile diversity. *Fitoterapia*, 80:496-505.
- Compo Expert For Growth GmbH. 2015. *Liquid Seaweed Extract, Basfoliar Kelp SL*. www.compo-expert.com
- Dahab, A., A. , H.N. Nady and H., S. Abd El-Salam. 2018. The potential of some plants extract as bio-stimulants for enhancing growth and biochemical constituents of banana plantlets. *Middle East J. Agric. Res.*, 7(3): 904-914, 2018 ISSN: 2077-4605
- Darjanto dan S. Satifah. 1990. *Pengetahuan Dasar Biologi Bunga dan Teknik Penyerbukan Silang Buatan*. PT Gramedia, Jakarta.
- Demain, A.L. and Fang, A. 2000. The natural functions of secondary metabolites. *Advances in Biochemical Engineering/Biotechnology*. 2000;69:1-39
- Desoky, E.M., A.M. Merwad, S. A. Ibrahim. 2019. Humus materials and *Moringa (Moringa oleifera* Lam.) Leaf Extract Modulate the Harmful Effect of Soil Salinity Stress in Sudan Grass (*Sorghum vulgare* L.). *Egypt. J. Agron.* Vol. 41, No.1, pp. 29 - 45 (2019)
- Devon, T.K., Scott, A.I. 1972. *Handbook of Natural Occurring Compounds*; Academic Press: New York, NY, USA, 1972. Vol. 2.
- Dimkpa, C. O., and P. S. Bindraban. 2016. Fortification of micronutrients for efficient agronomic production: a review. *Agronomy for Sustainable*

- Development, Springer Verlag/EDP Sciences/INRA, 2016, 36 (1), 10.1007/s13593-015-0346-6 .hal-01532372*
- Drobek, M., Magdalena F., and Justyna C. 2019. Plant Biostimulants: Importance of the Quality and Yield of Horticultural Crops and the Improvement of Plant Tolerance to Abiotic Stress A Review. *Agronomy* 2019, 9(6), 335; <https://doi.org/10.3390/agronomy9060335>
- Du Jardin, P. 2012. The science of biostimulants, A Bibliography Analysis. *Report On Biostimulant*. April 2012
- Du Jardin, P. 2015. Plant Biostimulants: Definition, concept, main categories and regulation. *Scientia Horticulturae*. <http://dx.doi.org/10.1016/j.scienta.2015.09.021>
- Duke, J. 2005. *Phytochemical and Etnobotanical Databases*, Maryland. Beltsville Agricultural Researcrh Center.
- Dwidjoseputro, D. 1984. *Pengantar Fisiologi Tumbuhan*. Jakarta : Penerbit PT. Gramedia
- EBIC.2012.Availableonlineat:<http://www.biostimulants.eu/>
- Ekowati, D. dan Nasir, M. 2011. Pertumbuhan Tanaman Jagung (*Zea mays L.*) Varietas Bisi-2 pada Pasir Reject dan Pasir Asli di pantai Trisik Kulonprogo. *J. Manusia dan Lingkungan*. Vol. 18. No 3., Nov 2011
- Elanchezhiana, R., Dameshwar, K., Kulasekaran R., Ashish K. B., Arti G., and Ashok K. P. 2017. Morpho-physiological and biochemical response of maize (*Zea mays L.*) plants fertilized with nano-iron (Fe_3O_4) micronutrient. *Journal Of Plant Nutrition* 2017, VOL. 40, NO. 14, 1969–1977 <https://doi.org/10.1080/01904167.2016.1270320>
- El-Mageed, T. A. , W., M. Semidab, and M. M. Radyc. 2017. Moringa leaf extract as biostimulant improves water use efficiency, physio-biochemical attributes of squash plants under deficit irrigation. <http://dx.doi.org/10.1016/j.agwat.2017.08.004>
- El-Naggar , E.B.; El-Darier S.M.; El-Mekanen A.S.; Švajdlenka E. and Emlièka M. 2014. Chemical Composition of Essential Oil of *Haplophyllum tuberculatum* (Rutaceae) Grow Wild in Different Habitats of Egypt. *Global Journal of Pharmacology*, 8 (3): 385-393.
- Elzaawely, A.A., Ahmed, M.E., Maswada, H.F., Xuan, T.D., 2016. Enhancing growth, yield, biochemical, and hormonal contents of snap bean (*Phaseolus vulgaris L.*) sprayed with moringa leaf extract. *Archives of Agronomy and Soil Science* 1–13.
- Elzaawely, A.A., Mohamed E. Ahmed, Hanafey F. Maswada, Asem A. Al-Araby & Tran D. Xuan . 2017. Growth traits, physiological parameters and hormonal status of snap bean (*Phaseolus vulgaris L.*) sprayed with garlic cloves extract. *Archives of Agronomy and Soil Science*, DOI: 10.1080/03650340.2017.1410543

- Fahad, S., Kh. M. Ahmad, M. A. Anjum, and S. Hussain. 2014. The Effect of Micronutrients (B, Zn and Fe) Foliar Application on the Growth, Flowering and Corm Production of Gladiolus (*Gladiolus grandiflorus* L.) in Calcareous Soils. *J. Agr. Sci. Tech. (2014)* Vol. 16: 1671-1682
- Fang, Y., Lin, Wang, Z., Xin, L., Zhao, X., An, And Qiuwei Hu. 2008. Effect of Foliar Application of Zinc, Selenium, and Iron Fertilizers on Nutrients Concentration and Yield of Rice Grain in China. *J. Agric. Food Chem.* 2008, 56, 2079–2084
- Ferreira, L. L., Carmen, R. S. C., Alexandre, I. A. P. and Augusto, A. S. T. 2018. Nitrogen Fertilization Combined with Biostimulant in Second-Crop Maize. *International Journal of Agriculture Innovations and Research Vol (6) : 5 ISSN 2319-1473*
- Foidl N., Makkar H. P. S. and Becker K. 2001. The potential of *Moringa oleifera* for agricultural and industrial uses. In: Fugile, L. J. (ed). *The Miracle Tree: The Multiple Attribute of Moringa*. pp. 45-76.
- Gao, M., Y., Chen, L., Wu and Y., Wang. 2019. Changes in the Profiles of Yield, Yield Component, Oil Content, and Citral Content in *Litsea cubeba* (Lour.) Persoon Following Foliar Fertilization with Zinc and Boron. *Forests* 2019, 10, 59; doi:10.3390/f10010059
- Gardner, F. P., Pearce, R. B., and Roger, L. M. 1991. *Fisiologi Tanaman Budidaya*. (Diterjemahkan oleh Herawati Susilo). Penerbit Universitas Indonesia (UI-Press): Jakarta, 428 hal.
- Gawronska, H. 2008. *Biostimulators : In Modern Agriculture, General aspect*. Editorial House Wie. Jutra, Limited. Warszawa.
- Gershenson, J. and Dudareva, N. 2007. The function of terpene natural products in the natural world. *Nat. Chem. Biol.* 2007, 3, 408–414.
- Ghazvineh, S. and M. Yousefi. 2012. Study the Effect of Micronutrient Application on Yield and Yield Components of Maize. *American-Eurasian J. Agric. & Environ. Sci.*, 12 (2): 144-147, 2012
- Goss M., P. Mafongoya and A. Gubba. 2017. *Moringa oleifera* Extracts Effect on *Fusarium solani* and *Rhizoctonia solani* Growth. *ARJA*, 6(1): 1-10, 2017; Article no.ARJA.29835
- Hala, A. El-Nour and A. E. Nabila. 2017. Effect of *Moringa oleifera* Leaf Extract (MLE) on Pepper Seed Germination seedlings Improvement, Growth, Fruit Yield and Its Quality. *Middle East Journal of Agriculture Research* 6(2) : 4
- Hanafy, M.S., F.M. Saadawy, S.M.N. Milad and R.M. Ali. 2012. Effect of Some Natural Extracts on Growth and Chemical Constituents of *Schefflera arboricola* Plants. *Journal of Horticultural Science & Ornamental Plants* 4 (1): 26-33, 2012 ISSN 2079-2158

- Hansch, R. and Mendel, R.R. 2009. Physiological Functions of Mineral Micronutrients (Cu, Zn, Mn, Fe, Ni, Mo, B, Cl). *Current Opinion in Plant Biology*, 12, 259-266. <https://doi.org/10.1016/j.pbi.2009.05.006>
- Hayat, S., H. Ahmad, K. Ren, M. Ali and Z. Cheng, 2016. Response of tomato growth to foliar spray and root drenching of aqueous garlic extract; a cocktail of antioxidative defenses, chlorophyll, carotenoid and soluble sugar contents. *Int. J. Agric. Biol.* 00: 000-000
- Heyne, K. 1987. *Tumbuhan Berguna Indonesia Jilid III*. Terjemahan Badan Litbang Kehutanan. Yayasan Sarana Wana Jaya, Jakarta.
- Howladar, S.M., 2014. A novel *Moringa oleifera* leaf extract can mitigate the stress effects of salinity and cadmium in bean (*Phaseolus vulgaris* L.) plants. *Ecotoxicology and Environmental Safety* 100, 69–75.
- Ibrahim, H. A. K. 2018. Effect of foliar application of compost water extract, humic acid, EDTA and micronutrients on the growth of fenugreek plants under sandy soil condition. *International Journal of Environmental Science and Technology* <https://doi.org/10.1007/s13762-019-02311-9>
- Imtiaz, M., Abdul, R., Parvez, K., M.Y. Memon and M. Aslam. 2010. The Role of Micronutrients in Crop Production and Human Health. *Pak. J. Bot.* , 42(4): 2565-2578, 2010.
- Januwati, M., S. Sudiatso, dan S.W. Andriani. 2002. Pengaruh dosis pupuk kandang dan tingkat populasi terhadap pertumbuhan dan produksi pegagan (*Centella asiatica* (L.) Urban) di bawah tegakan kelapa (*Cocos nucifera* L.). *Jurnal Bahan Alam Indonesia* 1(2): 49-57.
- Jhilik, N., Z., T. S., Hoque, A., Z., Md. Moslehuddin and Md. A. Abedin. 2017. Effect of foliar application of moringa leaf extract on growth and yield of late sown wheat. *Asian J. Med. Biol. Res.* 2017, 3 (3)
- 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 radiata* (L.) Hepper). *Phykos*, 42(2): 46-53.
- Lajayer, H. A., G.Savaghebi, J.Hadian, M., Hatami, and. M., Pezhmanmehr. 2016. Comparison of copper and zinc effects on growth, microand macronutrients status and essential oil constituents in pennyroyal (*Mentha pulegium* L.). *Braz. J. Bot* DOI 10.1007/s40415-016-0353-0
- Lasmadiwati, E.M.M Herminati, dan Y.H. Indriani. 2004. *Pegagan Meningkatkan Daya Ingat, Membuat Awet Muda, Menurunkan Gejala Stres dan Meningkatkan Stamina. Seri Agrisehat*. Penerbit Penebar Swadaya, Jakarta. II + 69 hlm.
- Leister, D., Varotto, C., Pesaresi, P., Niwergall, A., Salamini, F. 1999. Large Scale Evaluation of Plant Growth in *Arabidopsis thaliana* by Non-Invasive Image Analysis. *Plant Physiology and Biochemistry* 37:671-678
- Li, R., P. Guo, M. Baum, S. Grando, And S. Ceccarelli. 2006. Evaluation of

- Chlorophyll Content and Fluorescence Parameters as Indicators of Drought Tolerance in Barley. *Journal agricultural Science in China* 5(10)
- Liptan. 2005. Lembar Informasi Pertanian, BPTP Yogyakarta. Departemen Pertanian
- Mandic, V., Simi, A., Krnjaja, V., Bijelic, Z., Tomic, Z., Stanojkovic, A. and D. Ruzic D. M. 2015. Effect Of Foliar Fertilization On Soybean Grain Yield. *Biotechnology in Animal Husbandry* 31 (1), p 133-143 , 2015
- Manshuri, A. G. 2011. Laju Pertumbuhan dan generatif genotype kedelai berumur genjah. *Penelitian Pertanian Tanaman Pangan* 30 (3).
- Mansouri, H. Z, Z. Asrar and M. Mehrabani. 2009. Effect of Gibberelic Acid on Primary Terpenoids and Δ^9 - Tetrahydrocannabinol in *Cannabis sativa* at Flowering Stage. *J. of Integrative Plant Biol.* 51 (6)
- Mansyurdin, Z.A. Noly dan Z. Zakiah. 2017. Aplikasi ekstrak beberapa tumbuhan sebagai biostimulan untuk peningkatan pertumbuhan dan produksi beberapa tanaman pangan utama pada lahan sub optimal. Laporan Penelitian Berbasis Kompetensi/Penelitian Guru Besar. LPPM Universitas Andalas.
- Matthew, A. 2016. Moringa Leaf Extract On The Growth And Yield Of Pepper (*Capsicum annuum* L.). www.arpnjournals.com. Vol. 11, no. 3, march 2016
- Mekkei, M.E.R., and El-Haggan E. A.M.A.2014. Effect of Cu, Fe, Mn, Zn foliar application on productivity and quality of some wheat cultivars (*Triticum aestivum* L.). *Journal of Agricultural and Food Chemistry*, 2(9),283-291.
- Merwad, Abdel-R.,M. A.. 2017. Using *Moringa Oleifera* Extract as Biostimulant Enhancing the Growth, Yield and Nutrients Accumulation of Pea Plants. *Journal of Plant Nutrition*, DOI: 10.1080/01904167.2017.1384012
- Mohamed A.A. Bakry, Yasser R.A. Soliman and Samir A.M. Moussa. 2009. Importance of Micronutrients, Organic Manure and Biofertilizer for Improving Maize Yield and its Components Grown in Desert Sandy Soil. *Res. J. Agric. & Biol. Sci.*, 5(1): 16-23, 2009
- Mora, E. dan Fernando, A. 2012. Optimasi Ekstraksi Triterpenoid Total Pegagan (*Centella asiatica* (Linn.)) yang Tumbuh di Riau. *Jurnal Penelitian Farmasi Indonesia* 1(1)
- Morikawa, T., Matsuda, H., Li, N., Li, X. and Yoshikawa, M. 2007. Bioactive Saponins and glycosides-Part 29-Acylated oleanane-type triterpene saponins: Theasaponins A(6), A(7), and B-5, from the seeds of *Camellia sinensis*. *Helv. Chim. Acta* 90
- Mugenzi, I., Dong Y., Wansim A. N., Hai D., Etienne N., Angelique T., and Hai J. 2018. Effect of combined zinc and iron application rates on summer maize yield, photosynthetic capacity and grain quality. *Int. J. Agron. Agri. R.* Vol. 12, No. 5, p. 36-46, 2018
- Mustamu YA. 2009. Seleksi kedelai generasi F4 terhadap intensitas cahaya

- rendah di dua lingkungan [Tesis]. Pasca Sarjana Institut Pertanian Bogor.
- Musyarofah, N. 2006. Respons tanaman pegagan (*Centella asiatica* L. Urban) terhadap pemberian pupuk alami di bawah naungan. Skripsi. Departemen Budidaya Pertanian Fakultas Pertanian IPB, Bogor.
- Nagar P. K., Iyer R. I. and Sircar P. K. 2006. Cytokinins in developing fruits of *Moringapterigosperma* Gaertn. *Physiol Plant.* 55: 45-50.
- Nasir, M., Sattar Khan, A., Basra, S.M.A., Malik, A.U., 2016. Foliar applications of moringa leaf extract, potassium and zinc influence yield and fruit quality of 'Kinnow' mandarin. *Scientia Horticulturae* 210, 227–235.
- Naz, R. and Asghari, B. 2013. Effects of Calotropis procera and Citrullus colosynthis on germination and seedling growth of maize. *Allelopathy Journal* 31 (1): 105-116 (2013)
- Nozulaidi, M., M. Nurinani, M. Khairi, and S. M.D. Jahan . 2016. Production of Corn; Effects of Manganese Application on Plant Parameters. *J Agri Res* 2016, 1(2): 000109
- Nuning. S. A, Syafruddin, R. Efendi., dan S. Sunarti. 2007. Morfologi Tanaman dan Fase Pertumbuhan Jagung. Balai Penelitian Tanaman Serealia Maros. Pusat Penelitian dan Pengembangan Tanaman Pangan, Departemen Pertanian. *Jurnal jagung* Hal 16-28.
- Nyakpa, Y., Lubis, A.M., Mamat, A. P., dkk. 1988. *Kesuburan Tanah*. Penerbit Universitas Lampung
- Paliwal. R.L. 2000. *Tropical maize morphology*. In: *tropical maize:improvement and production*. Food and Agriculture Organization of the United Nations. Rome. p 13-20
- Palupi, E.R. dan Dedywiranto, Y. 2008. Kajian Karakter toleransi cekaman kekeringan pada empat genotipe bibit kelapa sawit (*Eleais guineensis*, Jacq). *Bul Agron* 36(1).
- Paradikovic, N., Tihana T., Svjetlana Z., Miroslav L., and Marija S. 2018. Biostimulants research in some horticultural plant species. *Food Energy Secur.* 2018;e00162. <https://doi.org/10.1002/fes.162>
- Pardo-García, A.I., Martínez-Gil, A.M., Cadahía, E., Pardo, F.Alonso, G. L., and Salinas, M.R. 2014. Oak extract application to grapevines as a plant biostimulant to increase wine polyphenols. *FoodRes.Int.* 55,150–160. doi:10.1016/j.foodres.2013.11.004
- Prahasta, A. 2009. *Budidaya, Usaha, Pengolahan. Agribisnis Jagung*. Penerbit Pustaka Grafika: Bandung
- Purwono, M. S dan H. Purnawati, 2007. *Budidaya 8 Jenis Tanaman Pangan Unggul*. Penebar Swadaya. Jakarta. 143 hal
- Rady M.M., E..S.M. Desoky, A.S. Elrys, and M.S. Boghdadyb. 2019. Can licorice root extract be used as an effective natural biostimulant for salt-stressed

- common bean plants?. *South African Journal of Botany* 121 (2019) 294–305
- Reece, J., B., Lisa, U., and Campbell, N., A. 2014. *Campbell Biology Eleventh Editio*: Pearson Higher Education
- Rengasamy, K.R.R., M., G. Kulkarni, S., C. Pendota and J. Van Staden. 2016. Enhancing growth, phytochemical constituents and aphid resistance capacity in cabbage with foliar application of eckol – a biologically active phenolic molecule from brown seaweed. *New Biotechnology Volume 33, Number 2 March 2016*
- Ridley, N.H. 1967. *The Flora of Malay Peninsula, Vol. I.*, L.Reeve and Co, Ltd.
- Robinson, T. 1995. *Kandungan Organik Tumbuhan Tinggi*. Diterjemahkan oleh Padmawinata, K. Penerbit Institut Teknologi Bandung. Bandung
- Rotundo, A., M. Forlaniand, C. and Di Vaio. 2004. *Influence of Shading net n vegetative and productives characteristics, gas exchange and chlorophyll content of the leaves in two blackberry (Rubus ulmifolius Schoot)*. (serial online). <http://www.actahort.org/books/457/457-42.htm>
- Rouphael Y., M. Giordano, M. Cardarelli, E. Cozzolino, M. Mori, M. C. Kyriacou, P. Bonini and G. Colla. 2018. Plant- and Seaweed-Based Extracts Increase Yield but Differentially Modulate Nutritional Quality of Greenhouse Spinach through Biostimulant Action. *Agronomy* 2018, 8, 126; doi:10.3390/agronomy8070126
- Ruzicka, L. 1953. The isoprene rule and the biogenesis of terpenic compounds. *Experimentia* 1953, 9,357–367.
- Salisbury, F.B. and C.W., Ross. 1995. *Fisiologi Tumbuhan Jilid 3*. (Diterjemahkan oleh Diah, R. Lukman dan sumaryono). Penerbit ITB : Bandung
- Santa, IG.P. dan P.E.W. Bambang. 1992. Studi taksonomi *Centella asiatica* (L.) Urban. *Warta Tumbuhan Obat Indonesia* 1(2): 46-48.
- Scully, B.T. and Wallace, D.H. 1990. Variation In and Relationship of Biomass, Growth Rate, Harvest Index, and Phenology To Yield Of Common Bean. *Journal American Society Horticulture Science*, 115(2) :218–225.
- Sekoli, M. M. S. 2009. Growth, Yield And Physiological Response Of Carrot (*Daucus carota* L.) To Different Fertilizer Levels And Bio-Stimulants. *Dissertation of Department of Soil, Crop and Climate Sciences, Faculty of Natural and Agricultural Sciences at the University of the Free State*. South Africa
- Shafeek, M.R., Y.I. Helmy and N. M. Omar. 2015. Use of some Bio-stimulants for Improving the Growth, Yield and Bulb Quality of Onion Plants (*Allium cepa* L.) under Sandy Soil Conditions. *Middle East Journal of Applied Sciences ISSN 2077-4613 (5) : 01*

- Shehu, H. E. and I. M. Okafor. 2017. Growth and Yield Response of Maize (*Zea mays* L.) to *Moringa oleifera* Leaf Extract and Boost Extra foliar fertilizers on Sandy Loam Soils of the Northern Guinea Savannah Zone of Nigeria. *Int. J. Innovative Agric. & Bio. Res.* 5 (3):23-29, 2017
- Sheren, A. A.H. and Eman, I. El-A. 2015. Improving Growth and Productivity of “Pear” Trees Using Some Natural Plants Extracts under North Sinai Conditions. DOI: 10.9790/2380-08110109 www.iosrjournals.org 1
- Shibata, S. 2000. A Drug over the Millennia: Pharmacognosy, Chemistry, and Pharmacology of Licorice, Yakugaku zasshi-J. *Pharmaceutical Society of Japan*. 120: 849–862.
- Singh, M., M. 2015. *Effect of Humic Acid and Micronutrients on Growth, Yield and Quality of Capsicum under Polyhouse Condition*. Thesis Maharana Pratap University of Agriculture and Technology, Udaipur, India
- Siriwardane, A.S., R.M. Dharmadasa and K. Samarasinghe, 2013. Distribution of withaferin A, an anticancer potential agent, in different parts of two varieties of *Withania somnifera* (L.) Dunal. grown in Sri Lanka. *Pak. J. Biol. Sci.*, 16: 141-144.
- Sitompul, S. M. dan B. Guritno. 1995. *Analisa Pertumbuhan Tanaman*. Gadjah Mada University Press. Yogyakarta
- Soleymani, A. and Mohamad, H. S. 2012. The Effects of Fe, Mn and Zn Foliar Application on Yield, Ash and Protein Percentage of Forage Sorghum in Climatic Condition of Esfahan. *International Journal of Biology*; Vol. 4, No. 3; 2012 ISSN 1916-9671 E-ISSN 1916-968X
- Souza, V.Q, B. Diego, N. Maicon, R. C. Ivan, N. F. Diego, A. K. Valmor, and S. Denise. 2015. Variance components and association between corn hybrids morpho-agronomic characters. *Científica, Jaboticabal*, v.43, n.3, p.246-253, 2015
- Steves, T. A. and I. M. Sussex. 1989. *Patterns in Plant Development Second Edition*. Cambridge University Press. Cambridge.
- Suarni dan I.U. Firmansyah. 2005. Beras jagung: Prosesing dan kandungan nutrisi sebagai bahan pangan pokok. Prosiding Seminar dan Lokakarya Nasional Jagung. Makassar. p. 393-398.
- Suhartono, Zaed, R.A.S., dan Khoiruddin, A. 2008. Pengaruh Interval Pemberian Air Terhadap Pertumbuhan Dan Hasil Tanaman Kedelai (*Glycine max* (L.) Merill) Pada Berbagai Jenis Tanah. *Jurnal Penelitian. Jurusan Agroekoteknologi Fakultas Pertanian Universitas Trunojoyo*. Madura.
- Sutardi. 2008. Kajian waktu panen dan pemupukan fosfor terhadap pertumbuhan dan produksi asiatisida tanaman pegagan (*Centella asiatica* L. Urban) di dataran tinggi. Tesis. Program Studi Agronomi, Sekolah Pascasarjana Institut Pertanian Bogor.

- Tahir, M. and N. Yasin. 2016. Effect Of Micronutrients Foliar Application On Yield And Quality Of Maize. *Pakistan J. Agric. Res.* Vol. 29 No.4, 2016
- Ummah, K. K., Zozy, A., N., Amri, B. dan Mansyurdin, 2017. Effect of certain plant crude extracts on the growth of upland Rice (*Oryza sativa L.*). *Int. J. Curr. Res. Biosci. Plant Biol.* 4(9), 1-6.
- USDA Plants. 2010. Classification of *Zea mays* L. Natural Resources Conservation Service. USDA.gov
- Vinoth, S., Sundari, P. G., Subiramani S., Govindarajan S., Ganesan P. K., Manju, Kalamani V., Vemuri L. and Narayanasamy J. 2017. Evaluation of Seagrass Liquid Extract on Salt Stress Alleviation in Tomato Plants. *Asian Journal of Plant Sciences* ISSN 1682-3974 DOI: 10.3923/ajps.2017.172.183
- Wijayakusuma, H., A.S. Wirian, T. Yaputra, S. Dalimarta, dan B. Wibowo. 1994. *Tanaman Berkhasiat Obat di Indonesia. Jilid 1.* Pustaka Kartini, Jakarta.
- Witham, F.H., D.F. Blydes., and R.M. Devlin. 1986. *Exercise in Plant Physiology second Edition*. Prinde Weber and Schmidt. Boston.
- Yadav, S.N., S.K. Singh and Omkar, K. 2016. Effect of Boron on Yield Attributes, Seed Yield and Oil Content of Mustard (*Brassica juncea* L.) on an Inceptisol. *Journal of the Indian Society of Soil Science*, Vol. 64, No. 3, pp 291-296 (2016) DOI: 10.5958/0974-0228.2016.00041.4
- Yakhin, O.I., Lubyanov, A.A., Yakhin, I.A., and Brown, P.H. 2017. Biostimulants in Plant Science: A Global Perspective. *Front. Plant Sci.* 7:2049. doi: 10.3389/fpls.2016.02049
- Yasari, E., Saedeh, Mozafari, Einali, Shafiee and A. Foroutan. 2009. Evaluation of Sink-Source Relationship of Soybean Cultivars at Different Dates of Sowing. *Res. J. Agric. And Biol. Sci.* 5(5).
- Zakiah, Z. 2017. Pemanfaatan Metabolit Sekunder Beberapa Jenis Tumbuhan sebagai Biostimulan terhadap dan Hasil Tanaman Kedelai (*Glycine max(L)* Merr.). Disertasi Pascasarjana Universitas Andalas, Padang.
- Zakiah, Z., Irfan, S., Amri, B., dan Mansyurdin. 2017. Effect of Crude Extracts of Six Plants on Vegetative Growth of Soybean (*Glycine max*Merr.). *International Journal of Advances in Agricultural Science and Technology*, Vol.4 Issue.7, July- 2017
- Zi, J., S., Mafu, and R.J. Peters. 2014 To Gibberelins and Beyond! Surveying The Evolution of (Di)terpenoid Metabolism. *Annl. Rev. Plant Biol.* 65