

DAFTAR PUSTAKA

- Abobatta, W. F. (2019a). Citrus Varieties in Egypt : An Impression. *International Research Journal of Applied Sciences*, 1–4.
- Abobatta, W. F. (2019b). Nutritional Benefits of Citrus Fruits. *American Journal of Biomedical Science & Research*, 3(4), 303–306.
- Acal, C., & Aguilera, A. M. (2022). Basis Expansion Approaches for Functional Analysis of Variance with Repeated Measures. *Adv Data Anal Classif*, 1, 1–31. <https://doi.org/https://doi.org/10.1007/s11634-022-00500-y>
- Acevedo, B., Ricciardi, G., Martinez, N., Lorenzo, D., & Dellacassa, E. (2012). Chemical profiles of Rangpur Lime (*Citrus limonia*) Peel Oils of Different Cultivars of Argentina. *Journal of Essential Oil Research*, 24(2), 131–136. doi:10.1080/10412905.2012.659521
- Adenaike, O., & Abakpa, G. O. (2021). Antioxidant Compounds and Health Benefits of Citrus Fruits. *European Journal of Nutrition & Food Safety*, 13(2), 65–74.
- Alitawan, A. A. I., & Ketut, S. (2013). Faktor-Faktor yang Mempengaruhi Pendapatan Petani Jeruk pada Desa Gunung Bau Kecamatan Kintaman Kabupaten Bangli. *E-Journal EP Unud*, 22(5), 796–826.
- Almeida, L. S., Sousa, E. M. R., da Silva, P. H., Oliveira, T. M., de Almeida, A. A. F., Filho, M. A. C., Soares Filho, W. D. S., & Gesteira, A. da S. (2019). The Morphological Study and Gene Expression Analysis in Citrus Hybrid with a Short Juvenile Period. *Crop Breeding and Applied Biotechnology*, 19(3), 262–268. <https://doi.org/10.1590/198470332019v19n3a37>
- Andrini, A., Suharsi, T. K., & Surahman, M. (2013). Studi Poliembriologi dan Penentuan Tingkat Kemasakan Fisiologis Benih Japansche Citroen (JC) Berdasarkan Warna Kulit Buah. *Jurnal Hortikultura*, 23(3), 195–202.
- Anitasari, S. D., Dwi, N. R. S., Ida, A. A., & Made, R. D. (2018). *Dasar Teknik Kultur Jaringan Tanaman*. Deepublish Budi Utama.
- Arnold, Von, S., Sabala, I., Boshkov, P., Dyachok, J., & Filanova, L. (2016). Developmental Pathways of Somatic Embryogenesis. *Plant Cell, Tissue and Organ Culture Journal*, 63, 223–149.
- Aseesh, P., & Sushma, T. (2016). Efficient Micropropagation of Citrus sinensis (L.) Osbeck from Cotyledonary Explants Suitable for the Development of Commercial Variety. *African Journal of Biotechnology*, 15(34), 1806–1812.
- Ayu, Y. P. K., Arry, S., Mudji, S., & Lilik, S. (2017). Studi Poliembriologi pada

- Benih Batang Bawah Jeruk Japansche Citroen (JC). *Jurnal Produksi Tanaman*, 5(9), 1497–1504.
- Berutu, F. S., Dita, A., & Darmawan, S. (2018). Pertumbuhan Tunas Citrumelo (*Citrus paradise* Macfaden cv. Duncan x *Poncirus trifoliata* (L.) pada berbagai Konsentrasi Nutrisi untuk Pertumbuhan Lambat (Slow Growth) secara In Vitro. *Jurnal Produksi Tanaman*, 6(1), 83–91.
- Bodade, S. R., Gahukar, S. J., & Akhare, A. A. (2022). In-vitro Propagation of Rangpur Lime (*Citrus limonia*). *The Pharma Innovation Journal*, 10(12), 2978–2980.
- Candra, R. T., Prasasty, V. D., & Karmawan, L. U. (2022). Biochemical Analysis of Banana Plants in Interaction between Endophytic Bacteria *Kocuria rhizophila* and the Fungal Pathogen *Fusarium oxysporum* f. sp. *cubense* Tropical Race (Foc TR4). *Biology and Life Sciences Forum*, 11(1), 1–8. <https://doi.org/https://doi.org/10.3390/IECPS2021-11990>
- Cartabia, A., Sarropoulou, V., Grigoriadou, K., Maloupa, E., & Declerck, S. (2022). In Vitro Propagation of *Alkanna tinctoria* Tausch.: A Medicinal Plant of the Boraginaceae Family with High Pharmaceutical Value. *Industrial Crops and Products*, 182, 1–8. <https://doi.org/https://doi.org/10.1016/j.indcrop.2022.114860>
- Caruso, M., Alberto, C., Giulia, M., Claudia, P., Ricardo, R., Fabrizio, S., Carmen, A., Alesandra, G., & Giuseppe, R. (2020). Rootstock Influence Yield Precocity, Productivity, and Pre-Harvest Fruit Drop of Mandared Pigmented Mandarin. *Journal of Agronomy MDPI*, 10, 1–12.
- Castle, W. S., Tucker, D. P. H., Krezdom, A. H., & Youtsey, C. O. (1993). *Rootstock for Florida Citrus* (Rootstock). University of Florida / Institute of Food and Agricultural Sciences.
- Chhargri, M. A., Khan, M. T., Nizamani, G. S., Yasmeen, S., Khan, I. A., Aslam, M. M., Rajpar, A. A., Tayyaba, Nizamani, F., Nizamani, M. R., Iqbal, R., Panhwar, M. J., & Siddiqui, M. A. (2020). Effect of Plant Growth Hormones On Shoot and Root Regeneration in Rose Under In Vitro Conditions. *Advancements in Life Sciences*, 8(1), 93–97.
- Choudhury, S. P., Saha, B., Das, S., & Biswas, M. K. (2019). An Improved and Efficient Organogenic Regeneration Protocol Using Epicotyl Segment of in Vitro Grown Kagzilime (*Citrus aurantifolia*) Seedling. *Journal Of Plant Development Sciences*, 11(7), 389–395.
- De Bels, M. P., Lomlek, C., & Sompong, U. (2021). Genetic Conservation Of Bamboo in Loei Province, Thailand: Identification, Distribution and Genetic Diversity. *Agriculture and Natural Resources*, 55(5), 703–714. <https://doi.org/10.34044/j.anres.2021.55.5.01>

- Devi, M. S., Reddy, G. U., Swaroop, B. T., & Kumar, R. K. (2022). Regressors with Anova-Reduced Features for Tariff Rate Prediction Using Machine Learning. *Lecture Notes in Electrical Engineering (Eds) Computational Intelligence in Machine Learning*, 835, 1–24.
- Dutta, S. K., Gurung, G., Yadav, A., Laha, R., & Mishra, V. K. (2022). Factors Associated with Citrus Fruit Abscission and Management Strategies Developed so Far. *New Zealand Journal of Crop and Horticultural Science*, 1, 1–8.
- Eed, A. M., Begum, H., Sivaramakrishnan, S., Silva, J. A. T. da, Amrender-Reddy, S., & Al-gabal, A. Q. (2011). Global Science Books Rapid Protocol for in Vitro Multiplication of Citrus limonia Osbeck Rootstock. *International Journal of Plant Developmental Biology*, 5(1), 78–82.
- Eskandarinezhad, M., Hossein, M., Barhaghi, S., Allameh, K., Sadrhaghghi, A., & Katebi, K. (2022). The Comparison of Calcium Hydroxide, Curcumin, and Aloe Vera Antibacterial Effects on 6-Week-Old Enterococcus Faecalis Biofilm as an Intracanal Medicament: An In Vitro Study. In *Dental Research Journal*, 1. www.ncbi.nlm.nih.gov/pmc/journals/1480
- Fazeli Nasab, B., Rahmani, A. F., & Hamide K Hajeh. (2021). Effects of Culture Medium and Plant Hormones in Organogenesis in Olive (CV. Kroneiki). *Journal of Plant Bioinformatics and Biotechnology*, 1(1), 1–13.
- Fazelo-Nasab, B. (2018). The Effect of Explant, BAP and 2, 4-D on Callus Induction Of Trachyspermum. *Journal of Food Sciences*, 12(1), 578–586.
- Firew, Y. (2017). The Effect of Plant Growth Hormones (Auxins and Cytokinins) on In-Vitro Shooting and Rooting Ability of Potato Nodal Culture. *European Journal of Biomedical and Pharmaceutical Science*, 4(05), 489–493. <https://www.researchgate.net/publication/349098272>
- Gaikwad, K., Patil, S., Nagre, P., & Potdukhe, N. (2018). Morphological Characterization of Citrus Genotypes. *International Journal of Chemical Studies*, 6(2), 516–529.
- Gerolino, E. F., Talita, P. C. C., Arquimedes, S. F., Eliezer, R. S., Regina, A. C. G., & Arildo, J. B. D. O. (2015). Evaluation of Limonoid Production in Suspension Cell Cultur of Citrus sinensis. *Revista Brasileira de Farmacognosia*, 25, 455–461.
- Haghighat, M., Alijani, H. Q., Ghasemi, M., Khosravi, S., Borhani, F., Sharifi, F., Irvani, S., Najafi, K., & Khatami, M. (2022). Cytotoxicity Properties of Plant-mediated Synthesized K-doped ZnO Nanostructures. *Bioprocess and Biosystems Engineering*, 45, 97–105.
- Hanif, Z. (2020). *Pengembangan Agribisnis Jeruk Nusantara*. Balai Penelitian Tanaman Jeruk dan Buah Subtropika.

- Haradzi, N. A., Khor, S. P., Subramaniam, S., & Chew, B. L. (2021). Regeneration and Micropropagation of Meyer lemon (*Citrus x meyeri*) supported by polymorphism analysis via molecular markers. *Scientia Horticulturae*, 286, (December 2020), 110225. <https://doi.org/10.1016/j.scienta.2021.110225>
- Harahap, F., Arisah, H., Harifah, I., Nikmatul, K. H., Mitra, D. P., Syahmi, E., Herbert, S., & Ramlan, S. (2019). *Kultur Jaringan Nanas*. Media Sahabat Cendekia.
- Harliana, Weaniati, Muslimin, & Suwastika, I. N. (2012). Organogenesis Tanaman Jeruk Keprok (*Citrus nobilis* Lour.) Secara In Vitro Pada Media MS Dengan Penambahan berbagai Konsentrasi IAA (Indole Acetid Acid) Dan BAP (Benzyl Amino Purin). *Jurnal Natural Science*, 1(1), 34–42.
- Hesami, M., Daneshvar, M. H., Yoosefzadeh-Najafabadi, M., & Alizadeh, M. (2018). Effect of plant growth regulators on indirect shoot organogenesis of *Ficus religiosa* through seedling derived petiole segments. *Journal of Genetic Engineering and Biotechnology*, 16(1), 175–180. <https://doi.org/10.1016/j.jgeb.2017.11.001>
- Jayanti, M. A. D., Sugiyatnto, A., Roviq, M., & Magfhoer, D. (2015). Kompabilitas Tujuh Varietas Calon Interstock Tanaman Jeruk pada Batang Bawah Japansche citroen (JC). *Jurnal Produksi Tanaman*, 10(10), 1–10.
- Jayaprakash, K., Manokari, M., Mahesh, K. B., Raj, M. C., Abhijit, D., & MAhipal, S. S. (2021). Influence of meta-topolin on In Vitro Propagation and Foliar Micro-morpho-anatomical Developments of *Oxystelma esculentum* (L.f.)Sm. *Plant Cell, Tissue and Organ Culture (PCTOC)*, 147, 325–337.
- Jenks, M. A., Hasegawa, P. M., & Jain, S. M. (2007). *Advances in Nolecular Breeding Toward Drought and Salt Tolerant Crops*. Springer.
- Kartahadimaja, J., Utomo, S. D., Yuliadi, E., Salam, A. K., Warsono, & Wahyudi, A. (2021). Agronomic Characters, Genetic and Phenotypic Diversity Coefficients, and Heritability of 12 Genotypes of Rice. *Biodiversitas*, 22(3), 1091–1097. <https://doi.org/10.13057/biodiv/d220302>
- Kementrian_Pertanian. (2016). *Outlook Komoditas Pertanian Sub Sektor Hortikultura*. Pusat Data dan Sistem Informasi Pertanian Kementrian Pertanian.
- Khan, U. M., Sameen, A., Aadil, R. M., Shahid, M., Sezen, S., Zarrabi, A., Ozdemir, B., Sevindik, M., Kaplan, D. N., Selamoglu, Z., Ydyrys, A., & Anitha, T. (2021). Citrus Genus and Its Waste Utilization: A Review on Health-Promoting Activities and Industrial Application. *Review Article*, 1, 1–17. <https://doi.org/10.1155/2021/2488804>

- Kodad, S., Melhaoui, R., Hano, C., Addi, M., Sahib, N., Elamrani, A., Abid, M., & Mihamou, A. (2021). Effect of Culture Media and Plant Growth Regulators on Shoot Proliferation and Rooting of Internode Explants from Moroccan Native Almond (*Prunus dulcis* Mill.) Genotypes. *International Journal of Agronomy*, 2021. <https://doi.org/10.1155/2021/9931574>
- Komakech, R., Kim, Y. G., Kim, W. J., Omujal, F., Yang, S., Moon, B. C., Okello, D., Rahmat, E., Kyeyune, G. N., Matsabisa, M. G., & Kang, Y. (2020). A Micropropagation Protocol for the Endangered Medicinal Tree *Prunus africana* (Hook f.) Kalkman: Genetic Fidelity and Physiological Parameter Assessment. *Frontiers in Plant Science*, 11(November). <https://doi.org/10.3389/fpls.2020.548003>
- Li, Y., He, F., Guo, Q., Feng, Z., Zhang, M., Ji, C., Xue, Q., & La, H. (2022). Compositional and Functional Comparison on the Rhizosphere Microbial Community between Healthy and *Sclerotium rolfsii*-infected Monkshood (*Aconitum carmichaelii*) Revealed the Biocontrol Potential of Healthy Monkshood Rhizosphere Microorganisms. *Biological Control*, 165. <https://doi.org/https://doi.org/10.1016/j.biocontrol.2021.104790>
- Llanes, A., Iparraguirre, J., Masciarelli, O., Maria, N., & Luna, V. (2019). Foliar Application of Phytohormones Enhances Growth of Maize and Soybean Seedlings. *Revista de Investigaciones Agropecuarias*, 45(1), 61–66.
- Mantilla, G., Lorenzo, G. A., & Mascarini, L. (2021). Hormonal Endogenous Changes in Response to the Exogenous 6-benzylaminopurine Application in Pre- and Post-harvesting *Lilium* Flower Stalks. *Ornamental Horticulture*, 27(3), 357–364.
- Mayerni, R., Satria, B., Wardhani, D. K., & Chan, S. (2020). Effect of auxin (2,4-D) and Cytokinin (BAP) in Callus Induction of Local Patchouli Plants (*Pogostemon cablin* Benth.). *IOP Conference Series: Earth and Environmental Science*, 583(1). <https://doi.org/10.1088/1755-1315/583/1/012003>
- Meyners, M., & Hasted, A. (2021). On the Applicability of ANOVA Models for CATA Data. *Food Quality and Preference*, 92, 104–219.
- Minipara, D., Hareshkumar, D., Ghansyam, P., Subhash, N., & Sushil, K. (2021). Identification of Best Surface Sterilization Treatment and Control of Endophytic Bacterial Contamination in *Annona squamosa* L. *International Journal of Plant & Soil Science*, 29(6), 1–10.
- Montesinos, J. C., Abuzeineh, A., Kopf, A., Juanes-Garcia, A., Ötvös, K., Petrášek, J., Sixt, M., & Benková, E. (2020). Phytohormone Cytokinin Guides Microtubule Dynamics During Cell Progression from Proliferative to Differentiated Stage. *The EMBO Journal*, 39(17), 1–22. <https://doi.org/10.15252/emboj.2019104238>

- Noori, A. M., & Lateef, M. A. A. (2020). In Vitro Multiplication of Citrus lemon L. with Different 6-Benzylaminopurine (BA) Concentrations. *Plant Archives*, 20(2), 6966–6968. <http://www.plantarchives.org/20-2/6966-6968> (6986).pdf
- Nufus, F. R., Darmawan, S., & Farida, Y. (2018). Slow Groth Jeruk Citrumelo (Citrus paradise Macfaden cv. Duncan x Poncirus trifoliata (L.) Raf). dalam Kondisi In Vitro : Pengaruh Tipe dan Konsentrasi Sumber Karbon. *Jurnal Produksi Tanaman*, 6(1), 154–160.
- Oksana, Elfi, R., & Syamsul. (2011). Peranan Berbagai Macam Media Tumbuh Bagi Pertumbuhan Stek daun Jeruk JC (Japansche Citroen) dengan Beberapa Konsentrasi BAP. *Jurnal Penelitian*, 11(1), 1–8.
- Pérez-Jiménez, M., & Pérez-Tornero, O. (2021). Plants Comparison of Four Systems to Test the Tolerance of ‘Fortune’ Mandarin Tissue Cultured Plants to *Alternaria alternata*. *Plants*, 10(1321), 1–8. <https://doi.org/10.3390/plants10071321>
- Pokhrel, S., Meyering, B., Bowman, K. D., & Albrecht, U. (2020). Horticultural Attributes and Root Architectures of Field-grown ‘Valencia’ Trees Grafted on Different Rootstocks Propagated by Seed, Cuttings, and Tissue Culture. *HortScience*, 56(2), 1–10.
- Pragassam, S. J., & Rasool, M. (2013). Dietary Component p-coumaric Acid Suppresses Monosodium Urate Crystal-induced Inflammation In Rats. *Inflammation Research*, 62(5), 489–498.
- R, P. S., Sonkamble, A. M., & Deshmukh, N. A. (2013). Evaluation of Rangpur Lime Strains as a Rootstock for Nagpur mandarin. *The Asian Journal of Horticulture*, 8(1), 226–229.
- Rahmahayu, Siti, F., & Mayta. (2014). Induksi Tunas Jeruk Siam (Citrus nobilis Lour.) Asal Kampar dengan Pemberian Benzil Amino Purine (BAP) secara In Vitro. *JOM FMIPA*, 1(2), 672–679.
- Ramdan, R., Handaji, N., Beyahia, H., & Mohammed. (2014). Influence of growth regulators on callus induction from embryos of five citrus rootstocks. *Journal of Applied Biosciences*, 73(1), 5959–5965.
- Raspor, M., Motyka, V., Kaleri, A. R., Ninković, S., Tubić, L., Cingel, A., & Ćosić, T. (2021). Integrating the Roles for Cytokinin and Auxin in De Novo Shoot Organogenesis: From Hormone Uptake to Signaling Outputs. *International Journal of Molecular Sciences*, 22(16). <https://doi.org/10.3390/ijms22168554>
- Rasud, Y., Ulfah, S., & Baharia. (2015). Pertumbuhan Jeruk Manis (Citrus sinensis L.) dengan Penambahan Berbagai Konsentrasi Sitokinin Secara In Vitro. *Jurnal Agroland*, 3(22), 197–204.
- Rivas, M. Á., Frierio, I., Alarcón, M. V., & Salguero, J. (2022). Auxin-Cytokinin

Balance Shapes Maize Root Architecture by Controlling Primary Root Elongation and Lateral Root Development. *Frontiers in Plant Science*, 13, 1–11.

Rodríguez, S. Á., López-González, D., Reigosa, M. J., Araniti, F., & Moreiras, A. M. S. (2022). Ultrastructural and Hormonal Changes Related to Harmaline-induced Treatment in *Arabidopsis thaliana* (L.) Heynh. Root Meristem. *Plant Physiology and Biochemistry*, 179, 78–89.

Safana, H. S., Ibrahim, M. A.-H., Kareem, A., & Abd, M. (2021). Effect of NAA and Chitosan in Rooting Branches Resulting from Stem Nodes Plantation of Kumquat (*Citrus japonica*) In Vitro. *Journal of Kerbala for Agricultural Sciences*, 8(1), 1–11.

Scordino, M., Leonardo, S., Francesco, L., Marco, A. B., Maria, G., Pasqualini, T., & Giacomo, G. (2015). Blood Orange Anthocyanins in Fruit Beverages : How the Commercial Shelf Life Reflects the Quality Parameter. *Journal of Beverages*, 1, 82–94.

Sharan, B., Mishra, Sharma, M., & Laxmi, A. (2021). Role of Sugar and Auxin Crosstalk in Plant Growth and Development. *Physiologia Plantarum*, 174(1), 1–21.

Siedlecki, L. S., & Bena, F. J. (2022). What the Clinical Nurse Specialist Should Know About Analysis of Variance Tests. *Clinical Nurse Specialist*, 36(1), 10–15. <https://doi.org/doi: 10.1097/NUR.0000000000000646>

Silva, T. I. da, Dias, M. G., Grossi, J. A. S., Ribeiro, W. S., Moraes, P. J. de, Araújo, F. F. de, & Barbosa, J. G. (2022). Application of Phytohormones as Attenuators of Salt Stress in *Tropaeolum majus* L. (*Tropaeolaceae*). *Acta Botanica Croatica*, 81(1), 51–60.

Soriano, L., Tavano, E. C. D. R., Behling, M., Filho, F. D. A. A. M., & Mendes, B. M. J. (2012). In Vitro Organogenesis of Rangpur Lime. *Rev. Bras. Frutic., Jaboticabal - SP*, 34(2), 349–355.

Sue, M., Fujii, M., & Fujimaki, T. (2021). Increased Benzoxazinoid (Bx) Levels in Wheat Seedlings Via Jasmonic Acid Treatment and Etiolation and Their Effects on Bx Genes Including Bx6. *Biochemistry and Biophysics Reports*, 27, 1–8.

Sugiyatno, A. (2016). *Teknik Pematahan Dormansi Mata Tunas Jeruk dengan Aplikasi Zat Pengatur Tumbuh*. Balai Penelitian Tanaman Jeruk dan Buah Subtropika.

Sugiyatno, A. (2017). *Potensi Penggunaan Beberapa Varietas Batang Bawah Sebagai Interstock untuk Memacu Pertumbuhan Benih Jeruk*. Balai Penelitian Tanaman Jeruk dan Buah Subtropika.

Suharsi, T. K., & Ananda, D. P. S. (2013). Pertumbuhan Mata Tunas Jeruk

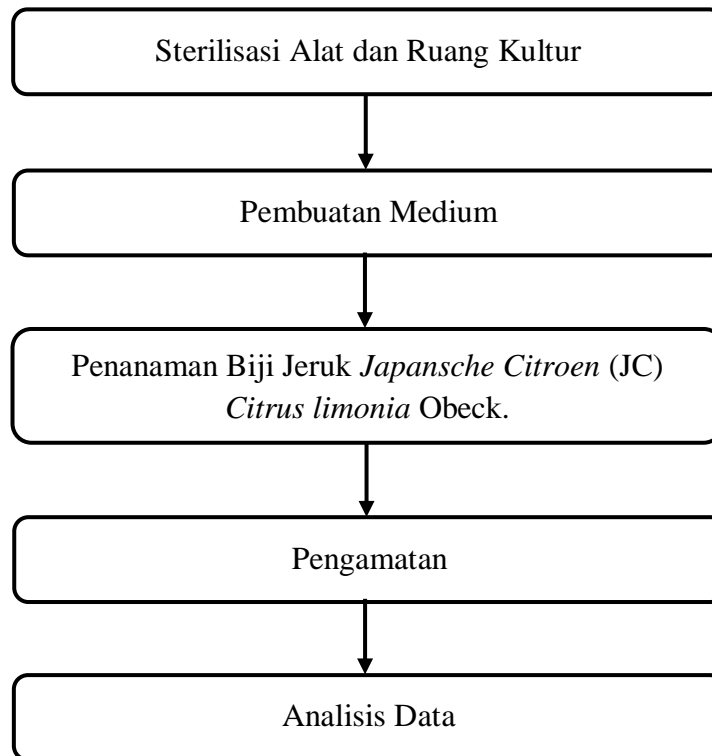
- Kepron (Citrus nobilis) Hasil Okulasi pada Berbagai Media Tanam dan Umur Batang Bawah Rough Lemon (Citrus jambhiri). *Jurnal Ilmu Pertanian Indonesia*, 18(2), 97–101.
- Surachman, D., & Aisyah, S. (2011). Teknik Sterilisasi Rimpang Jahe sebagai Bahan Perbanyak Tanaman Jahe Sehat. *Buletin Teknik Pertanian*, 16(1), 34–36.
- Suswono. (2011). *Lampiran Keputusan Menteri Pertanian*.
- Taghavi, T., Rahemi, A., Rafie, R., & Kering, M. K. (2021). Optimizing Turmeric Tissue Culture, Testing Different Media and a Plant Growth Regulator Matrix. *HortTechnology*, 31(6), 692–704. <https://doi.org/10.21273/horttech04890-21>
- Tai, K. Y., Dhaliwal, J., & Balasubramaniam, V. (2022). Leveraging Mann–Whitney U test on Large-scale Genetic Variation Data for Analysing Malaria Genetic Markers. *Malaria Journal*, 21(1). <https://doi.org/10.1186/S12936-022-04104-X>
- Templalexis, D., Tsitsekian, D., Liu, C., Daras, G., Šimura, J., Moschou, P., Ljung, K., Hatzopoulos, P., & Rigas, S. (2021). Potassium Transporter TRH1/KUP4 Contributes to Distinct Auxin-mediated Root System Architecture Responses. *Plant Physiology*, 188(2), 1043–1060.
- Tjitrosoepomo, G. (2010). *Taksonomi Tumbuhan (Spermatophyta)*. Gajah Mada University Press.
- Yamoune, A., Cuyacot, A. R., Zdarska, M., & Hejatko, J. (2021). Hormonal Orchestration of Root Apical Meristem Formation and Maintenance in Arabidopsis. *Journal of Experimental Botany*, 72(19), 6768–6788.
- Yang, W., Cortijo, S., Korsbo, N., Roszak, P., Schiesl, K., Gurzadyan, A., Wightman, R., Jonsson, H., & Meyerowitz, E. (2021). Molecular mechanism of cytokinin-activated cell division in Arabidopsis. *Science Journal*, 371(6536), 1350–1355. <https://doi.org/DOI: 10.1126/science.abe2305>
- Yanti, D., & Mayta, N. I. (2021). Induksi Tunas dari Eksplan Nodus Jeruk Kasturi (Citrus microcarpa Bunge.) dengan Penambahan 6-Benzyl Amino Purine (BAP) secara In Vitro. *Journal Biospecies*, 14(1), 53–58.
- Yao, N., Bi, F., Wang, Y., Jr, G. F., Hyuk Suh, J., Tang, X., Zhang, Y., & Gmitter Jr, F. G. (2021). Article 710598 (2021) Metabolomic Analysis Provides New Insight Into Tolerance of Huanglongbing in Citrus. *Front. Plant Sci*, 12, 710598. <https://doi.org/10.3389/fpls.2021.710598>
- Yulian, Yunitasari, A., Romeida, Marlin, Supanjani, & Joko, U. K. (2021). Growth and Development of Shoot on Lime (Citrus hystrix). *Biological Science Research, Atlantis Press*, 13, 348354.

- Yulianty, F., Afifuddin, L. A., Lita, S., & Sumeru, A. (2020a). Karakteristik Anatomi Akar dan Batang Tanaman Jeruk Batang Bawah sebagai Parameter Penduga Vigor Tanaman Jeruk Keprok Rimau Gerga Lebong (RGL). *Jurnal Hortikultura Indonesia*, 11(3), 166–173.
- Yulianty, F., Afifuddin, L. A., Lita, S., & Sumeru, A. (2020b). Short Communication: Morphology and Genetic Characteristic of Potential Citrus Rootstock in Indonesia. *Journal Biodiversitas*, 21(11), 5514–5520.
- Zhu, K., Ren, W., Yan, J., Zhang, Y., Xu, Y., Wang, Z., & Yang, Ji. (2022). Grain Yield and Nitrogen Use Efficiency are Increased by Exogenous Cytokinin Application Through the Improvement in Root Physiological Traits of Rice. *Plant Growth Regulation Volume*, 97, 157–169.
- Zoric, L., Mirjana, L., & Ljiljana, M. (2012). Anatomical Characteristics of Cherry Rootstock as Possible Preselecting Tools for Prediction of Tree Vigor. *Journal Plant Growth Regal*, 31(3), 320–331.

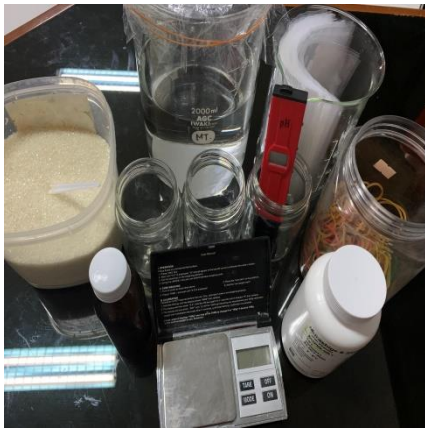
Lampiran 1. Komposisi Media *Murashige and Skoog* (MS)

No.	Komponen	Komposisi (mg/l)
1.	NH ₄ NO ₃	1650
2.	KNO ₃	1900
3.	CaCl ₂ . 2H ₂ O	440
4.	MgSO ₄ . 7H ₂ O	370
5.	KH ₂ PO ₄	170
6.	FeSO ₄ . 7H ₂ O	27
7.	NaEDTA	37.3
8.	MnSO ₄ . 4H ₂ O	22.3
9.	MnSO ₄ . 4H ₂ O	8.6
10.	H ₃ BO ₃	6.2
11.	KI	0.83
12.	Na ₂ . MoO ₄ . 2H ₂ O	0.25
13.	CuSO ₄ . 5H ₂ O	0.025
14.	CoCl ₂ . 6H ₂ O	0.025
15.	Myoinositol	100
16.	Niasin	0.5
17.	Piridoksin-HCl	0.5
18.	Tiamin-HCl	0.1
19.	Glisin	2

Lampiran 2. Skema Kerja Induksi Tunas Jeruk *Japansche Citroen* (Jc) *Citrus Limonia* Osbeck. pada Berbagai Konsentrasi Hormon *Benzylaminopurine* (BAP) secara *In Vitro*.



Lampiran 3. Proses Pembuatan Media



Persiapan



Penimbangan bahan



Pencampuran semua bahan



Pengukuran pH larutan media



Pelarutan media hingga mendidih



Penuangan media ke botol kultur



Perekatan tutup media



Sterilisasi media pada otoklaf

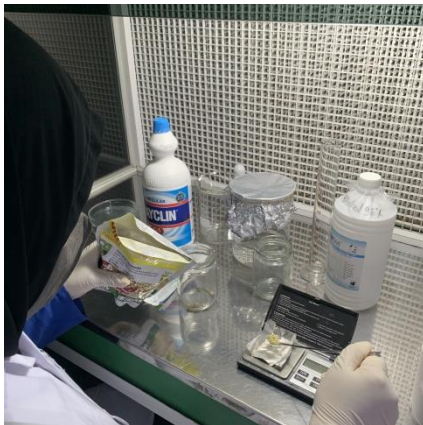
Lampiran 4. Proses Sterilisasi dan Penanaman Biji Jeruk JC pada Media Tanam



Pembilasan biji



Pengupasan biji



Pengukuran dan penambahan bahan sterilan



Penanaman biji



Pengamatan

Lampiran 5. Data Pertumbuhan Jeruk JC

a. Akar

Jumlah Akar

Minggu I

Perlakuan	Ulangan				
	1	2	3	4	5
0 ppm	1	0	1	1	1
0.5 ppm	1	1	1	0	0
1 ppm	1	0	1	1	1
1.5 ppm	1	0	0	1	1
2 ppm	1	0	1	1	1
2.5 ppm	0	0	0	0	0

Jumlah Akar

Minggu II

Perlakuan	Ulangan				
	1	2	3	4	5
0 ppm	1	1	1	1	1
0.5 ppm	1	2	1	2	1
1 ppm	1	2	1	1	1
1.5 ppm	1	1	2	1	2
2 ppm	2	2	2	1	1
2.5 ppm	0	0	0	0	0

Jumlah Akar

Minggu III

Perlakuan	Ulangan				
	1	2	3	4	5
0 ppm	1	1	1	1	1
0.5 ppm	1	2	2	2	1
1 ppm	1	2	1	1	2
1.5 ppm	1	1	2	1	2
2 ppm	2	2	2	1	1
2.5 ppm	0	0	0	0	0

Jumlah Akar

Minggu IV

Perlakuan	Ulangan				
	1	2	3	4	5
0 ppm	2	1	1	1	2
0.5 ppm	2	2	2	3	1
1 ppm	1	2	1	1	2
1.5 ppm	1	1	2	1	2
2 ppm	2	2	2	1	1
2.5 ppm	1	1	1	1	1

b. Tunas

Jumlah Tunas

Minggu I

Perlakuan	Ulangan				
	1	2	3	4	5
0 ppm	0	0	0	0	0
0.5 ppm	0	0	0	0	0
1 ppm	0	0	0	0	0
1.5 ppm	0	0	0	0	0
2 ppm	0	0	0	0	0
2.5 ppm	0	0	0	0	0

Jumlah Tunas

Minggu II

Perlakuan	Ulangan				
	1	2	3	4	5
0 ppm	1	1	1	0	0
0.5 ppm	0	0	0	0	0
1 ppm	0	0	0	0	0
1.5 ppm	0	0	0	0	0
2 ppm	0	0	0	0	0
2.5 ppm	0	0	0	0	0

**Jumlah Tunas
Minggu III**

Perlakuan	Ulangan				
	1	2	3	4	5
0 ppm	1	1	1	1	1
0.5 ppm	1	0	0	0	0
1 ppm	0	1	1	1	1
1.5 ppm	1	1	1	1	1
2 ppm	1	1	1	1	1
2.5 ppm	0	0	0	0	0

**Jumlah Tunas
Minggu IV**

Perlakuan	Ulangan				
	1	2	3	4	5
0 ppm	1	1	1	1	1
0.5 ppm	1	1	1	1	0
1 ppm	1	2	1	2	1
1.5 ppm	1	1	1	1	1
2 ppm	1	4	3	3	4
2.5 ppm	0	0	0	0	0

c. Batang

**Panjang Batang
Minggu I**

Perlakuan	Ulangan				
	1	2	3	4	5
0 ppm	0	0	0	0	0
0.5 ppm	0	0	0	0	0
1 ppm	0	0	0	0	0
1.5 ppm	0	0	0	0	0
2 ppm	0	0	0	0	0
2.5 ppm	0	0	0	0	0

**Panjang Batang
Minggu II**

Perlakuan	Ulangan				
	1	2	3	4	5
0 ppm	2.2	2.5	0	0	0
0.5 ppm	0	0	0	0	0
1 ppm	0	0	0	0	0
1.5 ppm	0	0	0	0	0
2 ppm	0	0	0	0	0
2.5 ppm	0	0	0	0	0

**Panjang Batang
Minggu III**

Perlakuan	Ulangan				
	1	2	3	4	5
0 ppm	4.4	3.8	2.3	2.1	2.2
0.5 ppm	1.7	0	0	0	0
1 ppm	0	0	0	0	0
1.5 ppm	0	0	0	0	0
2 ppm	2	0.2	0.3	1	1
2.5 ppm	0	0	0	0	0

**Panjang Batang
Minggu IV**

Perlakuan	Ulangan				
	1	2	3	4	5
0 ppm	6.2	5.9	5	4.5	5
0.5 ppm	3	1.9	1.5	1.4	1.1
1 ppm	1.6	2.2	1.7	2.3	1.5
1.5 ppm	1.8	2.4	1.7	2	1.6
2 ppm	4.3	1.3	2.2	2.1	2.3
2.5 ppm	0	0	0	0	0

d. Daun

**Jumlah Daun
Minggu I**

Perlakuan	Ulangan				
	1	2	3	4	5
0 ppm	0	0	0	0	0
0.5 ppm	0	0	0	0	0
1 ppm	0	0	0	0	0
1.5 ppm	0	0	0	0	0
2 ppm	0	0	0	0	0
2.5 ppm	0	0	0	0	0

**Jumlah Daun
Minggu II**

Perlakuan	Ulangan				
	1	2	3	4	5
0 ppm	2	2	0	0	0
0.5 ppm	0	0	0	0	0
1 ppm	0	0	0	0	0
1.5 ppm	0	0	0	0	0
2 ppm	0	0	0	0	0
2.5 ppm	0	0	0	0	0

**Jumlah Daun
Minggu III**

Perlakuan	Ulangan				
	1	2	3	4	5
0 ppm	2	2	2	2	2
0.5 ppm	2	0	0	0	0
1 ppm	0	0	0	0	0
1.5 ppm	0	0	0	0	0
2 ppm	2	2	0	0	2
2.5 ppm	0	0	0	0	0

**Jumlah Daun
Minggu IV**

Perlakuan	Ulangan				
	1	2	3	4	5
0 ppm	2	2	2	2	2
0.5 ppm	2	2	2	2	2
1 ppm	2	2	2	2	2
1.5 ppm	2	2	2	2	2
2 ppm	2	5	3	4	2
2.5 ppm	0	0	0	0	0

Lampiran 6. Hasil Uji Normalitas *Kolmogorov-Smirnov* Jumlah Akar, Jumlah Tunas, Panjang Batang dan Jumlah Daun Jeruk JC

	Perlakuan	Hasil K-S	Tabel K-S	Ket
Jumlah Akar	0 ppm	0.367	0.565	Normal
	0.5 ppm	0.3	0.565	Normal
	1 ppm	0.367	0.565	Normal
	1.5 ppm	0.367	0.565	Normal
	2 ppm	0.367	0.565	Normal
	2.5 ppm	0	0.565	Normal
Jumlah Tunas	0 ppm	0	0.565	Normal
	0.5 ppm	0.473	0.565	Normal
	1 ppm	0.367	0.565	Normal
	1.5 ppm	0	0.565	Normal
	2 ppm	0.3	0.565	Normal
	2.5 ppm	0	0.565	Normal
Panjang Batang	0 ppm	0.275	0.565	Normal
	0.5 ppm	0.248	0.565	Normal
	1 ppm	0.27	0.565	Normal
	1.5 ppm	0.224	0.565	Normal
	2 ppm	0.25	0.565	Normal
	2.5 ppm	0	0.565	Normal
Jumlah Daun	0 ppm	0	0.565	Normal
	0.5 ppm	0	0.565	Normal
	1 ppm	0	0.565	Normal
	1.5 ppm	0	0.565	Normal
	2 ppm	0.221	0.565	Normal
	2.5 ppm	0	0.565	Normal

Lampiran 7. Hasil Uji Homogenitas Jumlah Akar, Jumlah Tunas, Panjang Batang dan Jumlah Daun Jeruk JC

		Levene Statistic	df1	df2	Sig.	
Akar	Based on Mean	3.182	5	24	0.024	Tidak Homogen
	Based on Median	0.533	5	24	0.749	
	Based on Median and with adjusted df	0.533	5	20.000	0.749	
	Based on trimmed mean	3.054	5	24	0.028	

		Levene Statistic	df1	df2	Sig.	
Tunas	Based on Mean	4.180	5	24	0.007	Tidak Homogen
	Based on Median	2.567	5	24	0.054	
	Based on Median and with adjusted df	2.567	5	9.290	0.101	
	Based on trimmed mean	4.244	5	24	0.007	

		Levene Statistic	df1	df2	Sig.	
Batang	Based on Mean	2.588	5	24	0.052	Homogen
	Based on Median	1.053	5	24	0.410	
	Based on Median and with adjusted df	1.053	5	11.416	0.434	
	Based on trimmed mean	2.308	5	24	0.076	

		Levene Statistic	df1	df2	Sig.	
Daun	Based on Mean	15.540	5	24	0.000	Tidak Homogen
	Based on Median	10.000	5	24	0.000	
	Based on Median and with adjusted df	10.000	5	4.000	0.022	
	Based on trimmed mean	14.561	5	24	0.000	

Lampiran 8. Hasil Uji *Kruskal-Wallis* Jumlah Tunas, Daun dan Akar Jeruk JC

Test Statistics^{a,b}

		Tunas
Kruskal-Wallis H		23.012
df		5
Asymp. Sig.		0.000

a. Kruskal Wallis Test

b. Grouping Variable: Konsentrasi

		Daun
Kruskal-Wallis H		24.935
df		5
Asymp. Sig.		0.000

a. Kruskal Wallis Test

b. Grouping Variable: Konsentrasi

		Akar
Kruskal-Wallis H		7.651
df		5
Asymp. Sig.		0.177

a. Kruskal Wallis Test

b. Grouping Variable: Konsentrasi

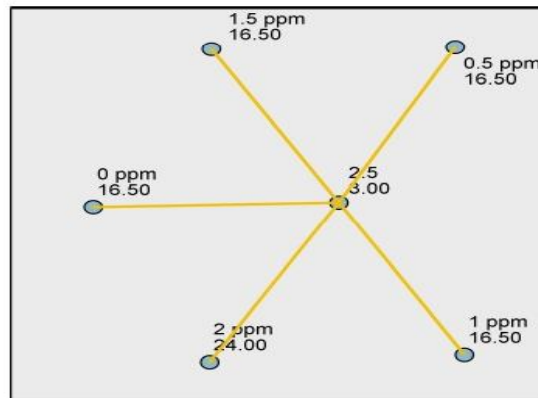
Lampiran 9. Hasil Uji *Analysis of Variance* Panjang Batang Jeruk JC

ANOVA						
<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between Groups	75.06166667	5	15.01233333	35.814712	2.26439E-10	2.62065415
Within Groups	10.06	24	0.419166667			
Total	85.12166667	29				

Lampiran 10. Hasil Uji Lanjut Jumlah Tunas, Jumlah Daun dan Panjang Batang Jeruk JC

a. Uji Mann Whitney Tunas

Pairwise Comparisons of Konsentrasi



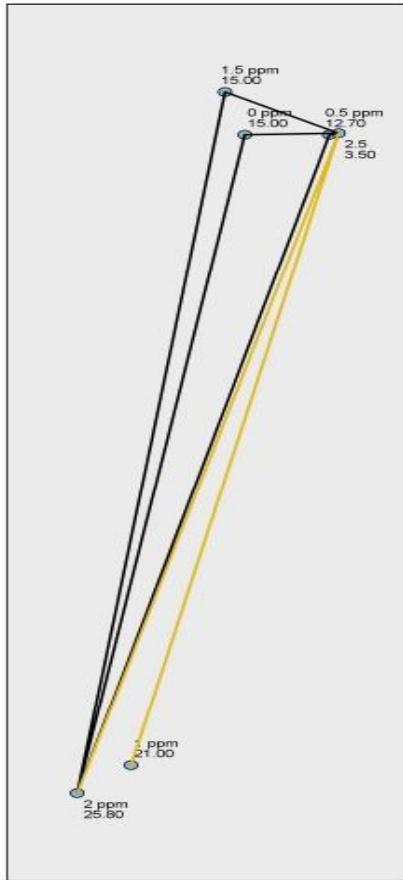
Each node shows the sample average rank of Konsentrasi.

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
2.5-0 ppm	13.500	4.318	3.126	.002	.027
2.5-0.5 ppm	13.500	4.318	3.126	.002	.027
2.5-1 ppm	13.500	4.318	3.126	.002	.027
2.5-1.5 ppm	13.500	4.318	3.126	.002	.027
2.5-2 ppm	21.000	4.318	4.863	.000	.000
0 ppm-0.5 ppm	.000	4.318	.000	1.000	1.000
0 ppm-1 ppm	.000	4.318	.000	1.000	1.000
0 ppm-1.5 ppm	.000	4.318	.000	1.000	1.000
0 ppm-2 ppm	-7.500	4.318	-1.737	.082	1.000
0.5 ppm-1 ppm	.000	4.318	.000	1.000	1.000
0.5 ppm-1.5 ppm	.000	4.318	.000	1.000	1.000
0.5 ppm-2 ppm	-7.500	4.318	-1.737	.082	1.000
1 ppm-1.5 ppm	.000	4.318	.000	1.000	1.000
1 ppm-2 ppm	-7.500	4.318	-1.737	.082	1.000
1.5 ppm-2 ppm	-7.500	4.318	-1.737	.082	1.000

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same. Asymptotic significances (2-sided tests) are displayed. The significance level is .05. Significance values have been adjusted by the Bonferroni correction for multiple tests.

b. Uji Mann Whitney Daun

Pairwise Comparisons of Konsentrasi



Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj.Sig.
2.5-0.5 ppm	9.200	5.009	1.837	.066	.994
2.5-0 ppm	11.500	5.009	2.296	.022	.325
2.5-1.5 ppm	11.500	5.009	2.296	.022	.325
2.5-1 ppm	17.500	5.009	3.494	.000	.007
2.5-2 ppm	22.300	5.009	4.452	.000	.000
0.5 ppm-0 ppm	2.300	5.009	.459	.646	1.000
0.5 ppm-1.5 ppm	-2.300	5.009	-.459	.646	1.000
0.5 ppm-1 ppm	-8.300	5.009	-1.657	.098	1.000
0.5 ppm-2 ppm	-13.100	5.009	-2.615	.009	.134
0 ppm-1.5 ppm	.000	5.009	.000	1.000	1.000
0 ppm-1 ppm	-6.000	5.009	-1.198	.231	1.000
0 ppm-2 ppm	-10.800	5.009	-2.156	.031	.466
1.5 ppm-1 ppm	6.000	5.009	1.198	.231	1.000
1.5 ppm-2 ppm	-10.800	5.009	-2.156	.031	.466
1 ppm-2 ppm	-4.800	5.009	-.958	.338	1.000

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same. Asymptotic significances (2-sided tests) are displayed. The significance level is .05. Significance values have been adjusted by the Bonferroni correction for multiple tests.

c. Uji Duncan Multiple Range Test (DMRT) Batang

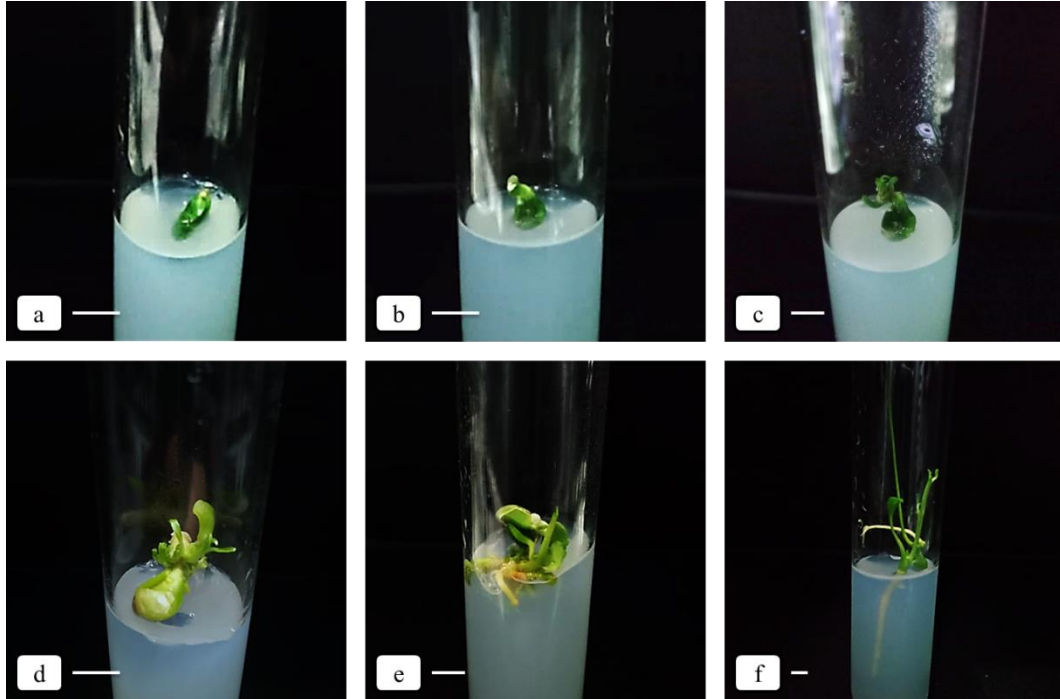
Duncan ^a		Nilai		
Perlakuan	N	Subset for alpha = 0.05		
		1	2	3
2.50	5	0.0000		
.50	5		1.7800	
1.00	5		1.8600	
1.50	5		1.9000	
2.00	5		2.4400	
.00	5			5.3200
Sig.		1.000	0.152	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 5.000.

Lampiran 11. Fase Pertumbuhan Jeruk JC

a. Pada Media BAP 2 ppm



b. Pada Media Kontrol (MS0)

