

DAFTAR PUSTAKA

- Abidin, Z. (1983). *Dasar-Dasar Pengetahuan Tentang Zat Pengatur Tumbuh : Auxin, Gibberelin, Cytokinin Ethylene, Inhibitors*. Bandung: Angkasa.
- Aggarwal, K. K., & Sachar, R. C. (1995). Gibberellin Stimulates Synthesis of a Protein Kinase in Dwarf Pea Epicotyls. *Phytochemistry*, 40(2), 383–387.
- Agustin, N. F. (2008). Penerapan Model Gompertz pada Pertumbuhan Bakteri *L. acidophilus* dan *B. longum* di Media Adonan Es Krim (Ice Cream Mix atau ICM) Jenis Standar. Malang: Universitas Brawijaya.
- Asakawa, Y., Tamari, K., Shoji, A., & Kaji, J. (1974). Metabolic Products of Gibberellin A₃ and Their Interconversion in Dwarf Kidney Bean Plants. *Agricultural and Biological Chemistry*, 38(4), 719–725.
- Ashrafuzzaman, M., Hossen, F. A., Ismail, M. R., Hoque, A., Islam, M. Z., Shahidullah, S. M., & Meon, S. (2009). Efficiency of Plant Growth-Promoting Rhizobacteria (PGPR) for The Enhancement of Rice Growth. *African Journal of Biotechnology*, 8(7), 1247–1252.
- Astuti, R. I. (2008). Analisis Karakter Pseudomonas sp. sebagai agen Pemacu Pertumbuhan Tanaman dan Biokontrol Fungi Patogen. *Disertasi*, Bogor.
- Atun, S. (2014). Metode Isolasi dan Identifikasi Struktur Senyawa Organik Bahan Alam. *Jurnal Konservasi Cagar Budaya Borobudur*, 8(2), 53–61.
- Baca, B. E., & Elmerich, C. (2007). Microbial Production of Plant Hormones. In *Associative and Endophytic Nitrogen-Fixing Bacteria and Cyanobacterial Associations* (pp. 113–143). Dordrecht: Springer.
- Bilkay, I. S., Karakoc, S., & Aksos, N. (2010). Indole-3-Acetic Acid and Gibberellic Acid Production in *Aspergillus niger*. *Turkish Journal of Biology*, 34(3), 313–318.
- Böhmke, C., & Tudzynski, B. (2009). Diversity, Regulation, and Evolution of the Gibberellin Biosynthetic Pathway in Fungi Compared to Plants and Bacteria. *Phytochemistry*, 70(15–16), 1876–1893.
- Bottini, R., Fulchieri, M., Pearce, D., & Pharis, R. P. (1989). Identification of Gibberellins A₁, A₃, and Iso-A₃ in Cultures of *Azospirillum lipoferum*. *Plant Physiol*, 90, 45–47.
- Budianto, & Suprastyani, H. (2017). Aktivitas Antagonis *Bacillus subtilis* terhadap *Streptococcus iniae* dan *Pseudomonas fluorescens*. *Jurnal Veteriner*, 18(36), 409–415.
- Campbell, N. A., Reece, J. B., & Mitchell, L. G. (1999). *Biology*. Menlo Park: Benjamin/Cummings.

- Colebrook, E. H., Thomas, S. G., Phillips, A. L., & Hedden, P. (2014). The Role of Gibberellin Signalling in Plant Responses to Abiotic Stress. *Journal of Experimental Biology*, 217(1), 67–75.
- Dachriyanus. (2004). *Analisis Struktur Senyawa Organik Secara Spektroskopi*. Padang: Lembaga Pengembangan Teknologi Informasi dan Komunikasi (LPTIK) Universitas Andalas.
- Day, R. Al, & Underwood, A. L. (2002). *Analisis Kimia Kuantitatif Edisi Keenam*. Jakarta: Erlangga.
- Ergün, N., Topcuoglu, S. F., & Yildiz, A. (2002). Auxin (Indole-3-Acetic Acid), Gibberellic Acid (GA₃), Abscisic Acid (ABA) and Cytokinin (Zeatin) Production by Some Species of Mosses and Lichens. *Turkish Journal of Botany*, 26(1), 13–18.
- Giwangkara, S. E. G. (2006). *Aplikasi Logika Syaraf Fuzzy Pada Analisis Sidik Jari Minyak Bumi Menggunakan Spetrofotometer Infra Merah-Transformasi Fourier (FT-IR)*. Cepu: Sekolah Tinggi Energi dan Mineral.
- Gomi, K., & Matsuoka, M. (2003). Gibberellin Signalling Pathway. *Current Opinion in Plant Biology*, 6(5), 489–493.
- Handayanto, E., & Hairiah, K. (2007). *Biologi Tanah Landasan Pengelolaan Tanah Sehat*. Yogyakarta: Pustaka Adipura.
- Harjadi, S. . (2009). *Zat Pengatur Tumbuh*. Jakarta: Gramedia.
- Hedden, P. (2017). Gibberellins. *Encyclopedia of Applied Plant Sciences*, 1, 411–420.
- Hedden, P., & Thomas, S. G. (2012). Gibberellin Biosynthesis and Its Regulation. *Biochemical Journal*, 444(1), 11–25.
- Hindersah, R., & Sudirja, R. (2010). Suhu dan Waktu Inkubasi untuk Optimasi Kandungan Eksopolisakarida dan Fitohormon Inokulan Cair *Azotobacter sp.* LKM6. *Jurnal Natur Indonesia*, 13(1), 67–71.
- HP, A. M. (2006). Efek Kenaikan pH pada Mekanisme Ekstraksi Cair-Cair Terhadap Asam Asam Karboksilat. *Jurnal Gradien*, 2(1), 130–133.
- Joo, G.-J., Kim, Y.-M., Kim, J.-T., Rhee, I.-K., Kim, J.-H., & Lee, I.-J. (2005). Gibberellins-Producing Rhizobacteria Increase Endogenous Gibberellins Content and Promote Growth of Red Peppers. *Journal of Microbiology (Seoul, Korea)*, 43(6), 510–515.
- Joo, G.-J., Kim, Y.-M., Lee, I.-J., Song, K.-S., & Rhee, I.-K. (2004). Growth Promotion of Red Pepper Plug Seedlings and the Production of Gibberellins by *Bacillus cereus*, *Bacillus macroides* and *Bacillus pumilus*. *Biotechnology Letters*, 26(6), 487–491.

- Joseph, B., Ranjan Patra, R., & Lawrence, R. (2012). Characterization of Plant Growth Promoting Rhizobacteria Associated with Chickpea (*Cicer arietinum* L.). *International Journal of Plant Production*, 1(2), 141–152.
- Kang, S.-M., Radhakrishnan, R., Khan, A. L., Kim, M.-J., Park, J.-M., Kim, B.-R., Lee, I.-J. (2014). Gibberellin Secreting Rhizobacterium, *Pseudomonas putida* H-2-3 Modulates the Hormonal and Stress Physiology of Soybean to Improve the Plant Growth Under Saline and Drought Conditions. *Plant Physiology and Biochemistry*, 84, 115–124.
- Kang, S., Latif, A., Waqas, M., You, Y., Hamayun, M., Joo, G., Lee, I. (2015). Gibberellin-producing *Serratia nematodiphila* PEJ1011 ameliorates Low Temperature Stress in *Capsicum annuum* L. *European Journal of Soil Biology*, 68, 85–93.
- Karadeniz, A., Topcuoğlu, Ş. F., & Inan, S. (2006). Auxin, Gibberellin, Cytokinin and Abscisic Acid Production in Some Bacteria. *World Journal of Microbiology and Biotechnology*, 22(10), 1061–1064.
- Karakoç, Ş., & Aksöz, N. (2006). Some Optimal Cultural Parameters for Gibberellic Acid Biosynthesis by *Pseudomonas* sp. *Turkish Journal of Biology*, 30(2), 81–85.
- Khan, A. A., Jilani, G., Akhtar, M. S., Naqvi, S. M. S., & Rasheed, M. (2009). Phosphorus Solubilizing Bacteria: Occurrence, Mechanisms and Their Role in Crop Production. *Journal of Agriculture and Biological Sciences*, 1(1), 48–58.
- Khopkar, S. M., & Saptorahardjo, A. (2003). *Konsep Dasar Kimia Analitik*. Jakarta: Penerbit Universitas Indonesia (UI-Press).
- Klopper, J. W., Lifshitz, R., & Zablotowicz, R. M. (1989). Free-Living Bacterial Inocula for Enhancing Crop Productivity. *Trends in Biotechnology*, 7(2), 39–44.
- Kumar, P. K. R., & Lonsane, B. K. (1988). Immobilized Growing Cells of *Gibberella fujikuroi* P-3 for Production of Gibberellic Acid and Pigment in Batch and Semi-continuous Cultures. *Applied Microbiology and Biotechnology*, 28(6), 537–542.
- Lahuerta Zamora, L., & Pérez-Gracia, M. T. (2012). Using Digital Photography to Implement the McFarland Method. *Journal of the Royal Society Interface*, 9(73), 1892–1897.
- Liu, Y., Sun, Y., He, S., Zhu, Y., Ao, M., Li, J., & Cao, Y. (2013). Synthesis and Characterization of Gibberellin – Chitosan Conjugate for Controlled-release Applications. *International Journal of Biological Macromolecules*, 57, 213–217.
- MacMillan, J. (2002). Erratum: Occurrence of Gibberellins in Vascular Plants,

- Fungi, and Bacteria. *Journal of Plant Growth Regulation*, 21(3), 242–243.
- Madigan, M., Stahl, & Clrack. (2012). *Biology of Microorganisms*. San Francisco: Pearson Education, Inc.
- Maheswari, Uma, T., Anbukkarasi, K., Hemalatha, T., & Chendrayan, K. (2013). Studies on Phytohormone Producing Ability of Indigenous Endophytic Bacteria Isolated from Tropical Legume Crops. *International Journal of Current Mycrobiology and Applied Science*, 2(6), 127–136.
- McMillan, S. (2007). *Promoting Growth with PGPR*. The Canadian Organic Grower. Soil Foodweb Canada Ltd. Soil Biology Lab. & Learning Centre.
- Moore, T. C. (2012). *Biochemistry and Physiology of Plant Hormones*. New Year: Springer Science & Business Media.
- Morrone, D., Chambers, J., Lowry, L., Kim, G., Anterola, A., Bender, K., & Peters, R. J. (2009). Gibberellin Biosynthesis in Bacteria: Separate ent-copalyl Diphosphate and ent-kaurene Synthases in *Bradyrhizobium japonicum*. *Federation of European Biochemistry Societies Letters*, 583(2), 475–480.
- Muis, A. (2016). Prospek *Bacillus subtilis* sebagai Agen Pengendali Hayati Patogen Tular Tanah pada Tanaman Jagung. *Jurnal Penelitian Dan Pengembangan Pertanian*, 35(1), 37–45.
- Mujiyanti, H. &. (2010). Jenis-Jenis dan Sifat-Sifat Bambu, Silika, Ekstraksi Silika, Keramik Silika, dan Karakterisasinya. *Skripsi*.Universitas Lampung.
- Navarro Llorens, J. M., Tormo, A., & Martínez-García, E. (2010). Stationary Phase in Gram-Negative Bacteria. *FEMS Microbiology Reviews*, 34(4), 476–495.
- Nelson, L. M. (2004). Plant Growth Promoting Rhizobacteria (PGPR): Prospects for New Inoculants. *Crop Management*, 3(1), 1–7.
- Nicolet, T. (2001). *Introduction to FTIR Spectrometry*. Madison, USA: Thermo Nicolet Inc.
- Niswati, A., Yusnaini, S., & Arif, M. A. S. (2008). Populasi Mikroba Pelarut Fosfat dan P-Tersedia pada Rizosfir Beberapa Umur dan Jarak dari Pusat Perakaran Jagung (*Zea mays L.*). *Jurnal Tanah Tropika*, 13(2), 123–130.
- Nst, R. A., & Aditiawati, P. (2016). Keanekaragaman Bakteri Rizosfer Pemacu Pertumbuhan Tanaman (Plant Growth Promoting Rhizobacteria/PGPR) selama Pertumbuhan Ubi Jalar Cilembu (*Ipomoea batatas L var . Rancing*). *Prosiding*, 899–906.
- Nur, M. A., & Adijuwana, H. (1989). *Teknik Spektroskopi dalam Analisis Biologis*. Bogor: Intitut Pertanian Bogor.

- Nurlatifah, D., & Setiati, Y. (2016). *Pengaruh Zat Pengatur Tumbuh Giberelin (GA_3) dan Pemangkasan terhadap Pertumbuhan dan Hasil Tanaman Rami (*Boehmeria nivea*, L. Gaud)*. Program Studi Agroteknologi Fakultas Sains dan Teknologi.
- Pelczar, M. J., Chan, E. C. S., & Pelczar, M. F. (2005). *Dasar-Dasar Mikrobiologi*. Jakarta: UI Press.
- Pin, C., & Baranyi, J. (2008). Single-cell and Population Lag Times as a Function of Cell Age. *Applied and Environmental Microbiology*, 74(8), 2534–2536.
- Rebetzke, G. J., Ellis, M. H., Bonnett, D. G., Mickelson, B., Condon, A. G., & Richards, R. A. (2012). Height Reduction and Agronomic Performance for Selected Gibberellin-Responsive Dwarfing Genes in Bread Wheat (*Triticum aestivum* L.). *Field Crops Research*, 126, 87–96.
- Respati, N. Y., Yulianti, E., & Rahmawati, A. (2017). Optimasi Suhu dan pH Media Pertumbuhan Bakteri Pelarut Fosfat dari Isolat Bakteri Termofilik. *Biologi-S1*, 6(7), 423–430.
- Rifalasna, D., Sumarsono, S., & Kristanto, B. A. (2019). Pengaruh Konsentrasi ZPT Gibberalin dan Lama Penyinaran terhadap Pertumbuhan dan Hasil Tanaman Krisan (*Chrysanthemum morifolium*). *Journal of Agro Complex*, 3(1), 84–95.
- Rodrigues, C., Vandenberghe, L. P. de S., Teodoro, J., Oss, J. F., Pandey, A., & Soccol, C. R. (2009). A New Alternative to Produce Gibberellic Acid by Solid State Fermentation. *Brazilian Archives of Biology and Technology*, 52(SPE), 181–188.
- Roopa, B., Maya, C., & Makari, H. K. (2012). Effect of Different PGPR Strains Along with Rhizobium on Nodulation and Chickpea Productivity. *Asian Journal of Experimental Biological Sciences*, 3(2), 424–426.
- Rosidah, M. S., Lambui, O., & Suwastika, I. N. (2018). Ekstrak Daun Tumbuhan Macaranga tanarius (L.) M.A Menghambat Laju Pertumbuhan Bakteri *Staphylococcus epidermidis*. *Natural Science: Journal of Science and Technology*, 7(1), 64–70.
- Rosmania, R., & Yanti, F. (2020). Perhitungan Jumlah Bakteri di Laboratorium Mikrobiologi Menggunakan Pengembangan Metode Spektrofotometri. *Jurnal Penelitian Sains*, 22(2), 76–86.
- Salazar-cerezo, S., Martínez-montiel, N., & García-sánchez, J. (2018). Gibberellin Biosynthesis and Metabolism : A Convergent Route for Plants , Fungi and Bacteria. *Microbiological Research*, 208, 85–98.
- Salisbury, A., & Frank, B. (1995). *Fisiologi Tumbuhan Jilid 3*. Bandung: ITB.
- Sastrohamidjojo, H. (2005). *Kromatografi*. Yogyakarta: Liberty.

- Setiaji, J., Johan, T. I., & Widantari, M. (2015). Pengaruh Gliserol pada Media *Tryptic Soy Broth* (TSB) Terhadap Viabilitas Bakteri *Aeromonas hydrophila*. *Dinamika Pertanian*, 30(1), 83–91.
- Simatupang, D. S. (2008). Berbagai Mikroorganisme Rizosfer pada Tanaman Pepaya (*Carica papaya* L.) di Pusat Kajian Buah-Buahan Tropika (PKBT) IPB Desa Ciomas, Kecamatan Pasirkuda, Kabupaten Bogor. *Skripsi*. Institut Pertanian Bogor.
- Skoog, D. A., & West, D. M. (1971). *Principles of Instrumental Analysis*, Holt, Reinhart, and Winston. New York: inc. Orlando, FI.
- Soesanto, L. (2008). *Pengantar Pengendalian Hayati Penyakit Tanaman*. Jakarta: PT Raja Grafindo Persada.
- Stirk, W. A., Bálint, P., Tarkowská, D., Novák, O., Maróti, G., Ljung, K., Van Staden, J. (2014). Effect of Light on Growth and Endogenous Hormones in *Chlorella minutissima* (*Trebouxiophyceae*). *Plant Physiology and Biochemistry*, 79, 66–76.
- Suhartati, T. (2017). *Dasar-Dasar Spektroskopometri UV-Vis dan Spektroskopometri Massa untuk Penentuan Senyawa Organik*. Bandar Lampung: AURA CV. Anugrah Utama Raharja.
- Susilo, H. (2015). Identifikasi dan Karakterisasi Rizobakteri Penghasil Gibberelin yang Diisolasi dari Tanah Hutan di Banten. *Thesis*. IPB.
- Susilo, H., Mubarik, N. R., & Triadiati, T. (2015). Characterization of Gibberellin Producing Rhizobacteria Isolated from Soil Forest in Banten. *Current Biochemistry*, 2(1), 32–41.
- Sutariati, G. A. K. (2012). Karakter Fisiologis dan Kemangkusen Rizobakteri Indigenus Sulawesi Tenggara sebagai Pemacu Pertumbuhan Tanaman Cabai. *Jurnal Holtikultura*, 22(1), 57–64.
- Tahid, F. (1994). Media, Isolasi, Sterilisasi, Peremajaan, dan Penyimpanan Mikroba. *PPT Diterbitkan*.
- Triyati, E. (1985). Spektrofotometer Ultra-Violet dan Sinar Tampak Serta Aplikasinya dalam Oseanologi. *Jurnal Oseana*, 10(1), 1877.
- Unyayar, S., Topcuoglu, S. F., & Unyayar, A. (1996). A Modified Method for Extraction and Identification of Indole-3-Acetic Acid (IAA), Gibberellic Acid (GA₃), Abscisic Acid (ABA) and Zeatin Produced by *Phanerochaete chrysosporium* ME 446. *Bulg J Plant Physiol*, 22(3–4), 105–110.
- Urbanova, I., & Svec, F. (2011). Monolithic Polymer Layer with Gradient of Hydrophobicity for Separation of Peptides Using Two-Dimensional Thin Layer Chromatography and MALDI-TOF-MS detection. *Journal of Separation Science*, 34(16-17), 2345–2351.

- Walker, T. S., Bais, H. P., Grotewold, E., & Vivanco, J. M. (2003). Root Exudation and Rhizosphere Biology. *Plant Physiology*, 132(1), 44–51.
- Walpole, R. E., & Myers, R. H. (1995). *Ilmu Peluang dan Statistika untuk Insinyur dan Ilmuwan edisi keempat*. Bandung: Institut Teknologi Bandung.
- Weaver, R. J. (1972). *Plant Growth Substances in Agriculture*. California: Calivornia University, Davis.
- Whitman, K. A. (2004). *Finfish and Shellfish Bacteriology Manual: Techniques and Procedures*. Iowa state press.
- Winahyu, D. A., Retnaningsih, A., & Aprillia, M. (2019). Penetapan Kadar Flavonoid pada Kulit Batang Kayu Raru (*CotylelobiummelanoxylonP*) dengan Metode Spektrofotometri UV-VIS. *Jurnal Analis Farmasi*, 4(1), 29–36.
- Wulandari, L. (2011). *Kromatografi Lapis Tipis*. Jember: PT. Taman Kampus Presindo.
- Yelti, S. N., Zul, D., & Fibriarti, B. L. (2014). *Formulasi Biofertilizer Cair Menggunakan Bakteri Pelarut Fosfat Indigenus Asal Tanah Gambut Riau*. *Jurnal Online Mahasiswa Fakultas Matematika dan Ilmu Pengetahuan Alam Universitas Riau*. Riau University.
- Zainudin, Z., Abadi, A. L., & Aini, L. Q. (2014). Pengaruh Pemberian Plant Growth Promoting Rhizobacteria (*Bacillus subtilis* dan *Pseudomonas fluorescens*) terhadap penyakit bulai pada tanaman jagung (*Zea mays L.*). *Jurnal Hama dan Penyakit Tumbuhan*, 2(1), 11–18.