

DAFTAR PUSTAKA

- Adiyoga, W., & Rofik, S. B. 2018. Persepsi petani sayuran tentang dampak perubahan iklim di Sulawesi Selatan. *Jurnal Hortikultura*. 28 (1), pp. 133-146
- Agustin, I. S. D., Penta, S., & Sri, W. 2023. Potensi metabolit sekunder *Streptomyces* sp. sebagai biopestisida pada berbagai konsentrasi terhadap penyakit moler bawang merah. *Jurnal Pertanian Agros*, 25(1), pp. 1043-1050.
- Al-Agamy, M. H., Alhuzani, M. R., Kelany, M. S., & Hamed, M. M. 2021. Production and partial characterization of α -amylase enzyme from marine actinomycetes. *BioMed research international*, 2021, pp. 1-15.
- Angelia, Jihan Fikra. 2021. Identifikasi senyawa metabolit sekunder yang terkandung dalam *streptomyces* sp. strain inacc a497 dan ab8 sebagai kandidat antimalaria. Skripsi. Jurusan Biologi. Fakultas Matematika dan Ilmu Pengetahuan Alam. Universitas Lampung, Lampung.
- Anugrahwati, D. R. 2008. aktifitas actinomycetes endofit sebagai bionematisida terhadap *Meloidogyne javanica*. *Crop Agro, Jurnal Ilmiah Budidaya*, 1(2), pp. 114-122.
- Assoumana, B.T., 2016. Effect of temperature on population dynamics of *Meloidogyne* spp. and *Fusarium* spp. Infesting sweet pepper in Niger (Doctoral dissertation, University of Cape Coast).
- Atallah, B. M., Haroun, S. A., & El-Mohsnawy, E. 2023. Antibacterial activity of two actinomycetes species isolatd from black sand in North Egypt. *South African Journal of Science*, 119(11-12), pp.1-8.
- Atif, A. M., Elzamik, F. I., Mohamed, G. M., Al-Quwaie, D. A., Ashkan, M. F., Alqahtani, F. S., ... & Abdelbasit, H. M. (2023). Biological control of the root-knot nematode (*Meloidogyne incognita*) on eggplants with various chitinase-producing *Streptomyces* strains. *European Journal of Plant Pathology*, 167(3), pp. 371-394.
- Baćmaga, M., Wyszkowska, J., Borowik, A., & Kucharski, J. 2022. Effects of tebuconazole application on soil microbiota and enzymes. *Molecules*, 27(21), pp. 7501.
- Baihaki, B., Liestiany, E., & Salamiah, S. 2024. Pengendalian nematoda puru akar (*Meloidogyne* spp.) pada seledri dengan bokashi kipahit dan *Trichoderma* sp. *Jurnal Proteksi Tanaman Tropika*, 7(3), pp. 952-960.
- Cahyono, B. 2008. Tomat Usaha Tani dan Penanganan Pasca Panen. Kanisius. Jakarta.

- Chaudhary, P., Janmeda, P., & Singh, D. 2023.. Extraction, isolation and characterization of bioactive compounds from *Euphorbia Neriifolia* (L.) leaf and evaluation of their antioxidant activity. Available at SSRN 4504269.
- Chen, Y. Y., Tsay, T. T., & Chen, P. 2024. Assessing the compatibility of *Streptomyces saracecicus* with pesticides and the efficacy in controlling root-knot nematode. *Journal of Phytopathology*, 172(5), e13385.
- Cornejo-Condori, G., Lima-Medina, I., Bravo-Portocarrero, R., Barzola-Tito, K., & Casa-Coila, V. 2021. Nematodes associated with andean papaya (*Carica pubescens* L.) in Sandia, Puno, Peru. *Bioagro*, 33(3), pp.191-202.
- Crosby, B. T., Ridzuan-Allen, A., & O'Neill, J. P. 2021. Volatile organic compound analysis for the diagnosis of pancreatic cancer. *Annals of Pancreatic Cancer*, pp. 4.
- Damayanti, A. P., Bambang, T. R., & Hangus, T., 2018. pengaruh pemberian plant growth promoting rhizobacteria (*Pseudomonas fluorescens*) terhadap nematoda puru akar *Meloidogyne* sp. pada tanaman tomat. *Jurnal HPT (Hama Penyakit Tumbuhan)*, 6(1), pp. 26-34.
- Daramola, F.Y., J.O. Popoola, A.O. Eni and O. Sulaiman, 2015. Characterization of root-knot nematodes (*Meloidogyne* spp.) associated with *Abelmoschus esculentus*, *Celosia argentea* and *Corchorus olitorius*. Asian. *Journal of Biological Sciences*. 8(1), pp. 42-50.
- Desaeger, J., Wram, C., & Zasada, I. 2020. New reduced-risk agricultural nematicides-rationale and review. *Journal of Nematology*, 52(1), pp. 1-16.
- Djiwanti, S. R. 2013. Perlakuan benih air panas, ekstrak mimba dan jarak kepyar untuk mengendalikan nematoda (*Meloidogyne* spp.) terbawa rimpang jahe. *Bul. Littro*, 26(1), pp.55-62.
- Djojosumarto, P. 2020. *Pengetahuan Dasar Pestisida Pertanian dan Penggunaannya*. AgroMedia.
- Efendi, E. 2021. Potential of bacterial isolates from peat land as controlling agent for the root knot nematodes *Meloidogyne incognita*. *Jurnal Fitopatologi Indonesia*, 17(6), pp. 243-250.
- El-Akshar, E. A., Elmeihy, R. M., Tewfike, T. A., & Abou-Aly, H. E. 2022. Endophytic *Streptomyces enissocaesilis* as a nematicidal and biostimulant agent. *Egyptian Academic Journal of Biological Sciences, G. Microbiology*, 14(2), pp. 123-133.
- Fitriana, I. N. 2020. Sitotoksitas Metabolis Sekunder *Streptomyces* sp. dan *Trichoderma* sp. Terhadap Spodoptera litura Hama Utama Tanaman Jagung [Doctoral dissertation, Tesis]: Fakultas Pertanian. Universitas Pembangunan Negara "Veteran" Jawa Timur).

- Fuentes, M. S., Briceño, G. E., Saez, J. M., Benimeli, C. S., Diez, M. C., & Amoroso, M. J. 2013. Enhanced removal of a pesticides mixture by single cultures and consortia of free and immobilized *Streptomyces* strains. *BioMed Research International*, pp. 1-9
- Goh, J. X. H., Tan, L. T. H., Law, J. W. F., Kuppusamy, G., Janaranjani, M., Khaw, K. Y., ... & Goh, B. H. (2024). *Streptomyces* sp. MUM 195J: A promising probiotic for controlling vibrio parahaemolyticus infection in aquaculture. *Progress In Microbes & Molecular Biology*, pp. 7(1).
- Gunawan, O. S. (2006). Virulensi dan ras ralstonia solanacearum pada pertanaman kentang di Kecamatan Pangalengan, Kabupaten Bandung, Jawa Barat. *Jurnal Hortikultura*, 16(3), pp 136792.
- Gupta, N. V., & Shukshith, K. S. 2016. Qualification of autoclave. *Int J Pharm Tech Res*, 9(4), pp. 220-226.
- Harir, M., Bendif, H., Bellahcene, M., Fortas, Z., & Pogni, R. 2018. *Streptomyces* secondary metabolites. *Basic biology and applications of actinobacteria*, 6, pp. 99-122.
- Harni, R., & Samsudin, J. A. G. 2015. Pengaruh formula bionematisida bakteri endofit *Bacillus* sp. terhadap infeksi nematoda *Meloidogyne* sp. pada tanaman kopi. *Jurnal Tanaman Industri dan Penyegar*, 2(3),pp. 143-149.
- Hasan, P. A., & Tri, A. 2017. Hubungan jenis serangga penyebuk dengan morfologi bunga pada tanaman tomat (*Lycopersicon Esculentum* Mill.) dan sawi (*Brassica juncea* Linn.). *Saintifik*, 3(1), pp. 77-82.
- Hidayati, N., & Rahmansyah, D. 2012. *Tomat unggul*. Penebar Swadaya Grup.
- Huang, J., Chen, A. L., Zhang, H., Yu, Z., Li, M. H., Li, N., ... & Zheng, Y. G. 2015. Gene replacement for the generation of designed novel avermectin derivatives with enhanced acaricidal and nematicidal activities. *Applied and Environmental Microbiology*, 81(16), pp. 5326-5334.
- Indarti, S., & Bambang, R. 2014. Potensi jamur parasit telur sebagai agens hayati pengendali nematoda puru akar *Meloidogyne incognita* pada tanaman tomat. *Jurnal Perlindungan Tanaman Indonesia*, 18(2), pp. 65-70.
- Irmawatie, L., Raden, R. R., & Nuraidah, N. 2019. Ketahanan tujuh varietas tomat terhadap nematoda puru akar (*Meloidogyne* spp.). *Agrotechnology Research Journal*, 3(2), pp. 61-68.
- Jwaili, M. 2019. Pharmaceutical applications of gas chromatography. *Open Journal of Applied Sciences*, 9(9), pp. 683-690.
- Kaur, H., Singh, S., Rathore, Y. S., Sharma, A., Furukawa, K., Hohmann, S., Gang, A. and Mondal, A. K. 2014. Differential role of HAMP-like linkers in regulating the functionality of the group III histidine kinase DhNik1p. *Journal of Biological Chemistry*, 289(29), pp. 20245-20258.

- Kaur, T., Jasrotia, S., Ohri, P., & Manhas, R. K. 2016. Evaluation of in vitro and in vivo nematicidal potential of a multifunctional streptomycete, *Streptomyces hydrogenans* strain DH16 against *Meloidogyne incognita*. *Microbiological research*, 192, pp. 247-252.
- Khan, M., & Tanaka, K. (2023). *Purpureocillium lilacinum* for plant growth promotion and biocontrol against root-knot nematodes infecting eggplant. *Plos one*, 18(3), pp. 0283550.
- Kumar, M., Kumar, P., Das, P., Solanki, R., & Kapur, M. K. 2022. Proactive role of *Streptomyces* spp. in plant growth stimulation and management of chemical pesticides and fertilizers. *International Journal of Environmental Science and Technology*, 19(10), pp. 10457-10476.
- Kurniawati, F., Neng, N. T., & Munif, A. 2020. Nematoda parasit pada seledri (*Apium graveolens* L.) dan pengendaliannya menggunakan bakteri endofit secara in vitro. *Agrovigor: Jurnal Agroekoteknologi*, 13(1), pp. 70-81.
- Liu, Y., Yang, X., Shen, W., Wang, X., Liu, H., Wang, Y., & Lu, H. (2024). Organophosphorus nematicide potentiated nematicidal effect by changing rhizosphere bacterial and fungal communities. *Rhizosphere*, 31, pp. 100936.
- Ma, J., Zhang, W., Zhou, Y., Jing, J., Yang, X., Peng, X., ... & Cao, D. 2024. Unfavorable soil environment for root-knot nematode infestation: insights from metabolomics and microbial diversity analysis in tomato rhizosphere soil. *Polish Journal of Environmental Studies*.
- Macomber, L., & Hausinger, R. P. 2011. Mechanisms of nickel toxicity in microorganisms. *Metallomics*, 3(11), pp. 1153-1162.
- Mishra, S., Pang, S., Zhang, W., Lin, Z., Bhatt, P., & Chen, S. 2021. Insights into the microbial degradation and biochemical mechanisms of carbamates. *Chemosphere*, pp. 279, 130500.
- Mugiastuti, E., Ruthi, R. F., & Prasmaji, S. 2012. Pemanfaatan *Bacillus* sp. Dan *Pseudomonas fluorescens* Untuk Mengendalikan Penyakit Layu Tomat Akibat Sinergi R. *Solanacaerum* Dan *Meloidogyne* sp. In "Seminar Nasional" Pengembangan Sumber Daya Pedesaan dan Kearifan Lokal Berkelanjutan II". Jenderal Soedirman University.
- Mujoko, T. Sastrahidayat, Hadiastono T, Djauhari S. 2014. Antagonistic effect of *Streptomyces* sp. on spore germination and mycelial growth of *Fusarium oxysporum* f.sp. lycopersici. *International Journal of Biosciences*. 5(9), pp. 414-422.
- Mustika, I. 2005. Konsepsi dan strategi pengendalian nematoda parasit tanaman perkebunan di Indonesia. *Perspektif: Review Penelitian Tanaman Industri*, 4(1), 20-32.
- Na, J. I. N., Hui, X. U. E., LI, W. J., WANG, X. Y., Qian, L. I. U., LIU, S. S., Pei, L.I.U., Zhao, J.L. and Heng, J. I. A. N. 2017. Field evaluation of

- Streptomyces rubrogriseus HDZ-9-47 for biocontrol of Meloidogyne incognita on tomato. Journal of integrative agriculture*, 16(6), pp. 1347-1357.
- Nugrohorini. 2011. Nematoda Parasit Tanaman. UPN Press: Surabaya
- Nugraha, A., & Nandiyanto, A. B. D. 2021. How to read and Interpret GC/MS spectra. *Indonesian Journal of Multidisciplinary Research*, 1(2), pp 171-206.
- Otieno, P. O., Lalah, J. O., Virani, M., Jondiko, I. O., & Schramm, K. W. 2010. Soil and water contamination with carbofuran residues in agricultural farmlands in Kenya following the application of the technical formulation Furadan. *Journal of Environmental Science and Health Part B*, 45(2), pp. 137-144.
- Park, H. H., & Lee, J. H. 2009. Impact of pesticide treatment on an arthropod community in the Korean rice ecosystem. *Journal of Ecology and Environment*, 32(1), pp. 19-25.
- Pasorong, M. E. P. 2017. Pengaruh Jenis dan Dosis Nematisida Terhadap Aktifitas *Meloidogyne Javanica*. *Crop Agro, Jurnal Ilmiah Budidaya*, 1(2), pp. 123-129.
- Pebriyani, Shanti Dewi., 2018. Eksplorasi Bakteri Rizosfer Pada Tanaman Kubis Di Ub Forest Dan Uji Ketahanannya Terhadap Insektisida Berbahan Aktif Klorantraniliprol. [Skripsi]. Universitas Brawijaya.
- Prasetya, D. 2022. Isolasi dan identifikasi *Streptomyces* sp. pada kolam tanah di Desa Tenggur Tulungagung Jawa Timur. *Meditory: The Journal of Medical Laboratory*, 10(1), pp. 1-7.
- Prihastuti, P. 2011. Struktur komunitas mikroba tanah dan implikasinya dalam mewujudkan sistem pertanian berkelanjutan. *El-Hayah*, 1(4) pp. 174-181.
- Pusat Karantina Tumbuhan. 2010. Pedoman Diagnosis OPTK Golongan Nematoda. Jakarta: Kementerian Pertanian.
- Raharja, S., Prayoga, S., & Listya, C. S. 2009. Rekayasa optimasi teknik pirolisis biomassa jagung untuk produksi bahan tambahan makanan dan energi. *Prosidding Seminar Hasil Penelitian*. IPB. Bogor.
- Rahayuningtias, S. and Wludjeng, W., 2016. Kompilasi penyakit yang disebabkan oleh *Meloidogyne* spp. dengan Jamur *Fusarium Oxysporum* F. *Lyccopersici* Pada Tanaman Tomat. *Agritrop: Jurnal Ilmu-Ilmu Pertanian (Journal of Agricultural Science)*, 14 (2), pp. 161-164
- Raihana, R., Dewi, F., & Zairin, Z. 2019. Aplikasi perkembangan stadia hidup nematoda puru akar (*Meloidogyne* spp.) mulai dari fase telur sampai dewasa pada pertanaman tomat (*Solanum lycopersicum* L.) di Kota Banjarbaru. *Agroekotek View*, 1(2), pp. 25-35.

- Rajendran, K., Krishnamoorthy, M., Karuppiah, K., Ethiraj, K., & Sekar, S. 2024. Chitinase from *Streptomyces mutabilis* as an effective eco-friendly biocontrol agent. *Applied Biochemistry and Biotechnology*, 196(1), PP. 18-31.
- Ramazani, A., Moradi, S., Sorouri, R., Javani, S., & Garshasbi, M. 2013. Screening for antibacterial activity of *Streptomyces* species isolatd from Zanjan province, Iran. *Int J Pharm Chem Biol Sci*, 3(2), pp. 342-349.
- Rana, G. J., Momin, I. A., & Birari, U. 2019. Factors influencing the brand preference and farmers loyalty towards Bt cotton in Sabarkantha district. *International Journal of Chemical Studies*, 7(5), pp. 111-115.
- Salem, M. F., Osman, G. Y., Hasab El-Nabi, S. E., & Khalaf, F. 2012. effect of certain medicinal plant natural products on *Meloidogyne Incognita* management on tomato under greenhouse conditions. *Journal of Plant Protection and Pathology*, 3(10), pp.1041-1050.
- Santo Eky, Djamilah. and Inorah, E., 2019. Efektivitas ekstrak daun jarak pagar (*Jatropha Curcas L.*) dalam menghambat serangan nematoda puru akar (*Meloidogyne spp.*) pada tanaman tomat. *Jurnal Ilmu-ilmu Pertanian Indonesia*. 21(1), pp. 1-8
- Shahid, M., Manoharadas, S., Chakdar, H., Alrefaei, A. F., Albeshr, M. F., & Almutairi, M. H. (2021). Biological toxicity assessment of carbamate pesticides using bacterial and plant bioassays: An in-vitro approach. *Chemosphere*, 278, pp.130372.
- Shandee, S. G., Shanthi, A., Kalaiaras, P., & Swarnapriya, R. 2021. Profiling Interactive Metabolomics of Okra against Root-Knot nematode, *Meloidogyne incognita* under Monotrophic Condition and Ditrophic Interaction. *Indian Journal of Nematology*, 51(2), pp. 137-148.
- Soesetyaningsih, E., & Azizah, A. 2020. Akurasi perhitungan bakteri pada daging sapi menggunakan metode hitung cawan. *Berkala sainstek*, 8(3), pp. 75-79.
- Sudin, S., Rieny, S. Dan Rita, M. H., 2020. Penapisan dan pola pertumbuhan bakteri kitinolitik dari cangkang rajungan (*Portunus pelagicus*). *Jambura Fish Processing Journal*, 2(1), pp.36-45.
- Sulardi, T., & Sany, A. M. 2018. Uji pemberian limbah padat pabrik kopi dan urin kambing terhadap pertumbuhan dan produksi tanaman tomat (*Lycopersicum esculatum*). *Journal of Animal Science and Agronomy Panca Budi*, 3(2), pp. 7-13
- Suryaminarsih, P., Harijani, W. S., Muljani, I. R., Mindari, W., & Rahmadhini, N. 2020. Screening and identification of Actinomycetes produced chitinolytic from suppression soil as biological agents of fruit flies (*Bactrocera* sp.). *Eurasian Journal of Biosciences*, 14(1).

- Swibawa, I. G., Fitriana, Y., Suharjo, R., Wardana, R. A., & Haryani, M. S. 2018. Jamur *Paecilomyces lilacinus* parasit telur nematoda puru akar pada pertanaman jambu biji di Lampung.
- Syahrok, S. F., Penta, S., & Wiludjeng, W. 2021. Potensi *Trichoderma* sp. dan *Streptomyces* sp. sebagai agensia hayati nematoda puru akar (*Meloidogyne* sp.) pada tanaman tomat secara in vitro. *Agrista: Jurnal Ilmiah Mahasiswa Agribisnis UNS*, 5(1), pp. 1199-1206.
- TA Abdel-Wareth, M., A Ghareeb, M., S Abdel-Aziz, M., & M El-Hagrassi, A. 2019. Snailicidal, antimicrobial, antioxidant and anticancer activities of *Beauveria bassiana*, *Metarrhizium anisopliae* and *Paecilomyces lilacinus* fungal extracts. *Egyptian Journal of Aquatic Biology and Fisheries*, 23(2), pp. 195-212.
- Thirdyawati, N. 2013. *Pengendalian Nematoda Puru Akar (Meloidogyne spp.) Hama Tanaman Kenaf (Hibiscus cannabinus L.) dengan Rotasi Tanaman dan Penggunaan Bakteri Antagonis* (Doctoral dissertation, Universitas Brawijaya).
- Tondon, S. A., Deore, R., & Parab, A. 2018. Isolation, identification and the use of carbofuran degrading microorganisms for the removal of carbofuran pesticide from contaminated waters. *Global Journal of Bio-Science and Biotechnology*, 6, 89-95.
- Wahyudi, I. (2012). *Bertanam Tomat Didalam Pot & Kebun Mini*. AgroMedia.
- Wang, Y., Jin, Y., Han, P., Hao, J., Pan, H., & Liu, J. 2021. Impact of soil disinfestation on fungal and bacterial communities in soil with cucumber cultivation. *Frontiers in Microbiology*, 12, 685111.
- Wardani, N., 2017. Perubahan iklim dan pengaruhnya terhadap serangga hama. *Prosiding Seminar Nasional Agroinovasi Spesifik Lokasi Untuk Ketahanan Pangan Pada Era Masyarakat Ekonomi ASEAN*. Pp. 1015-1026
- Widiantini, F., Yulia, E. and Ceppy, N., 2018. Potensi antagonisme senyawa metabolit sekunder asal bakteri endofit dengan pelarut metanol terhadap jamur *G. boninense* Pat. *Agrikultura*. 29 (1) pp. 55-60
- Winarto, W., Trizelia, T. And Yenny, L., 2019. Antagonistic fungi exploration against root-knot nematodes (*Meloidogyne* spp.) from tomato rhizosphere. In *Prosiding Seminar Nasional Masyarakat Biodiversitas Indonesia*. 5(2), pp. 194-198
- Wu, R., Li, Y., Meng, J., & Han, J. 2025. Effects of dazomet fumigation combined with *Trichoderma harzianum* on soil microbial community structure of continuously cropped strawberry. *Horticulturae*, 11(1), pp. 35.
- Wulandari, D., Amatullah, L. H., Lunggani, A. T., Pratiwi, A. R., & Budiharjo, A. 2024. Antibacterial activity and molecular identification of soft coral *Sinularia* sp. symbiont bacteria from Karimunjawa Island against Skin

- pathogens *Propionibacterium acnes* and *Staphylococcus epidermidis*. In *BIO Web of Conferences* (Vol. 92, p. 02001). EDP Sciences.
- Wulandari, S., Nisa, Y. S., Taryono, T., Indarti, S., & Sayekti, R. S. 2021. Sterilisasi peralatan dan media kultur jaringan. *Agrotechnology Innovation (Agrinova)*, 4(2), pp. 16-19.
- Zhang, C. M., Xu, M. J., Gong, Y., Li, X. W., Huang, J. J., Zhou, S. F., ... & Qin, S. (2020). Identification and characterization of nematicidal activity of organic volatiles from a *Pseudomonad rhizobacterium*. *Rhizosphere*, 16, pp. 100244.
- Zhu, F., Xiao, J., Zhang, Y., Wei, L., & Liang, Z. 2020. Dazomet application suppressed watermelon wilt by the altered soil microbial community. *Scientific reports*, 10(1), pp. 21668.