DAFTAR PUSTAKA

Ahmad, I., Zahin, M., Aqil, F., Hasan, S., Khan, M. S. A., & Owais, M. (2021). *Piper betle L.: A comprehensive review on its ethnomedicinal uses, phytochemistry, and pharmacological activities. Journal of Ethnopharmacology,267*,113593.https://doi.org/10.1016/j.jep.2020.113593

Ahmed, M., Anjum, M. A., Hussain, S., & Nasir, M. (2023). *Application of plant-based edible coatings and extracts influences the postharvest quality and shelf life potential of "Surahi" guava fruits. Food Chemistry Advances, 2*, 100189. Elsevier. https://pubmed.ncbi.nlm.nih.gov/37305266/

Akram, W. (2024). *Insecticidal potential of botanical extracts for management of Bactrocera dorsalis. The Journal of Basic and Applied Zoology, 85*, 63. https://doi.org/10.1186/s41936-024-00417-2

Akram, W., Hussain, A., Abbas, Q., & Abbas, A. (2024). *Insecticidal potential of botanical extracts for management of the oriental fruit fly Bactrocera dorsalis (Diptera: Tephritidae). The Journal of Basic and Applied Zoology, 85*, 63. https://doi.org/10.1186/s41936-024-00417-2

Akyun, S., Indraloka, A. B., Alfiyah, N., & Yuniwati, I. (2024). *Aplikasi pestisida nabati daun pepaya pada tanaman cabai di lahan Kelompok Tani Diporejo Desa Kedayunan Kabupaten Banyuwangi. Jumat Pertanian: Jurnal Pengabdian Masyarakat, 5*(2), 86–91. https://doi.org/10.32764/abdimasper.v5i2.4644

Asri, N. A. M., Aini, C. N. A. C., Shahari, R., & Mohd Yunus, N. S. (2023). *Leaf anatomy of Morinda citrifolia L. in Pahang, Malaysia, and its taxonomic significance. Revelation and Science, 1*(1). https://doi.org/10.31436/revival.v1i1.382

Biswas, K., Chattopadhyay, I., Banerjee, R. K., & Bandyopadhyay, U. (2022). *Biological activities and medicinal properties of Piper betle L. Journal of Ethnopharmacology, 77*(2), 95–102. https://doi.org/10.1016/S0378-8741(01)00319-3

Biswas, P., Anand, U., Saha, S. C., Kant, N., Mishra, T., Masih, H., Bar, A., Pandey, D. K., Jha, N. K., Majumder, M., Das, N., Gadekar, V. S., Shekhawat, M. S., Kumar, M., Radha, Proćków, J., Lastra, J. M. P. de la, & Dey, A. (2022). *Betelvine (Piper betle L.): A comprehensive insight into its ethnopharmacology, phytochemistry, and pharmacological, biomedical, and therapeutic attributes. Journal of Cellular and Molecular Medicine, 26*(11), 3083–3119. https://doi.org/10.1111/jcmm.17323

Campolo, O., Cherif, A., Ricupero, M., Siscaro, G., Grissa-Lebdi, K., Russo, A., Cucci, L. M., Di Pietro, P., Satriano, C., Desneux, N., Biondi, A., Zappalà,

L., & Palmeri, V. (2017). *Citrus peel essential oil nanoformulations to control the tomato borer, Tuta absoluta: Chemical properties and biological activity. Scientific Reports, 7*(1), 13036. https://doi.org/10.1038/s41598-017-13413-0

Chang, H., Huang, Y., & Lee, S. (2024). *Effect of dual-modified tapioca starch/chitosan/SiO_2 composite coatings on physicochemical and quality attributes of fruit. Foods, 13*(23), 3735. https://doi.org/10.3390/foods13233735

da Costa, D. S., Silva, M. R., & Oliveira, A. P. (2024). *Cassava starch/carboxymethyl cellulose edible coating incorporated with tocopherol mix: Effects on oxidative stability of nuts and potential for shelf-life extension. Foods, 13*(17), 2732. https://doi.org/10.3390/foods13172732

Danjuma, S., Thaochan, N., Permkam, S., & Satasook, C. (2015). *Egg morphology of two sibling species of the Bactrocera dorsalis complex Hendel (Diptera: Tephritidae). Journal of Entomology and Zoology Studies, 3*(2), 268–273.

Dehya, M. (2015). *Edible coating based on cassava starch and its role in prolonging fruit shelf life. International Journal of Food Science and Technology, 50*(4), 939–946.

Dewi. (2012). *Budidaya, khasiat, dan cara olah mengkudu untuk mengobati berbagai penyakit.* Banguntapan, Bantul, Yogyakarta: Pustaka Baru Press.

Dharmayanti, N. L. P. I., Muksin, I. K., & Suarsana, I. N. (2021). *Potensi ekstrak daun mengkudu (Morinda citrifolia L.) sebagai pestisida nabati terhadap serangga hama. Jurnal Biologi Tropis, 21*(1), 37–44. https://doi.org/10.29303/jbt.v21i1.2264

Dias, B. L., Almeida Sarmento, R., Venzon, M., Viteri Jumbo, L. O., Soares dos Santos, L. S., Moura, W. D. S., Mourão, D. C. S., Fernandes, P. R. D. S., Neitzke, T. R., & Oliveira, J. V. D. (2024). *Morinda citrifolia essential oil: A plant resistance biostimulant and a sustainable alternative for controlling phytopathogens and insect pests. Biology, 13*, 479. https://doi.org/10.3390/biology13070479

Dini, I. R., Khairoh, N. U., Roza, P. J., & Sari, S. (2023). *Pendampingan masyarakat Kecamatan Rumbai Barat Pekanbaru dalam pembuatan pestisida nabati ekstrak daun pepaya. Abditani: Jurnal Pengabdian Masyarakat, 6*(1), 64–68. https://doi.org/10.31970/abditani.v6i1.213

Duguma, H. T. (2022). *Potential applications and limitations of edible coatings for fresh produce preservation. International Journal of Food Science & Technology, 57*(8), 3557–3568. https://doi.org/10.1111/ijfs.15407

Esuyawkal, D. (2024). *Tannin inhibition zone noni fruit (Morinda citrifolia Linn) shows antibacterial effect on Escherichia coli. Middle East Research Journal of Agriculture and Food Science, 4*(2), 76–85.

Ezedin, Z. (2023). *Confirmation of Morinda bracteata (Rubiaceae) in New Guinea. Gardens' Bulletin Singapore, 75*(2), 257–262. https://doi.org/10.26492/gbs75(2).2023nita

Fahmi, I. F., Pujiati, R. S., & Ellyke, E. (2022). *Efektivitas ekstrak bawang putih (Allium sativum) sebagai repellent lalat buah (Musca domestica). Ikesma, 18*(4), 251. https://doi.org/10.19184/ikesma.v18i4.26185

Falguera, V., Quintero, J. P., Jiménez, A., Muñoz, J. A., & Ibarz, A. (2011). *Edible films and coatings: Structures, active functions and trends in their use. Trends in Food Science & Technology, 22*(6), 292–303. https://doi.org/10.1016/j.tifs.2011.02.004

Fayisa, A., et al. (2024). *Review on biochemical counter defense of plant-insect interaction. International Journal for Multidisciplinary Research.*

Gupta, C., Kumar, A., & Singh, R. (2023). *Essential oil composition, antioxidant, antimicrobial and insecticidal activities of Piper betle L. leaf essential oil. Industrial Crops and Products, 199*, 116778. https://doi.org/10.1016/j.indcrop.2023.116778

Handaru, O. D., Witjaksono, W., & Martono, E. (2019). *Study on the attractiveness of fruit flies (Bactrocera spp.) to mango fruit extract. Jurnal Perlindungan Tanaman Indonesia, 23*(2), 228. https://doi.org/10.22146/jpti.35315

Hernowo, T., Wahyuni, S., & Susanto, D. (2019). *Efektivitas minyak atsiri daun sirih (Piper betle) sebagai repellent lalat buah Bactrocera dorsalis. Jurnal HPT Tropika, 19*(1), 45–52.

Heryanto, R., & Arlianti, T. (2021). *Noni (Morinda citrifolia L.) relationship analysis based on morphology character and random amplified polymorphic DNA (RAPD). Proceeding of the International Conference on Agriculture and Applied Science (ICoAAS 2020).* https://doi.org/10.25181/icoaas.v1i1.2004

Hidayat, F., & Lestari, D. (2022). *Uji efektivitas ekstrak buah mengkudu (Morinda citrifolia) sebagai bahan repellen terhadap lalat buah Bactrocera papayae. Jurnal Ilmu Pertanian Indonesia, 27*(1), 112–119.

Hidayat, T., & Sari, R. N. (2022). *Potensi ekstrak bawang putih (Allium sativum L.) dalam menekan serangan lalat buah (Bactrocera dorsalis) pada tanaman cabai merah. Jurnal Proteksi Tanaman, 6*(1), 12–20.

Iqna, Y., & Sabirin, M. (2020). *Aplikasi edible coating pati kulit singkong (Manihot utilissima Pohl.) pada tomat (Solanum lycopersicum L.) serta uji kadar total fenol dan kadar vitamin C sebagai sumber belajar. Jurnal Ilmiah Pendidikan Biologi.* Universitas Ahmad Dahlan, Yogyakarta.

Isman, M. B. (2006). *Botanical insecticides, deterrents, and repellents in modern agriculture and an increasingly regulated world. Annual Review of Entomology, 51*, 45–66. https://doi.org/10.1146/annurev.ento.51.110104.151146

Jaffar, S., & Lu, Y. (2022). *Toxicity of some essential oil constituents against oriental fruit fly, Bactrocera dorsalis (Hendel) (Diptera: Tephritidae). Insects, 13*(10), 954. https://doi.org/10.3390/insects13100954

Kahar, A., Rianti, M., Taslim, S., & Azis, E. (2024). *Pengolahan pestisida nabati berbahan dasar daun pepaya di Desa Bamba Puang, Kecamatan Anggeraja, Kabupaten Enrekang. Jurnal Pengabdian Magister Pendidikan IPA, 7*(4), 1634–1639. https://doi.org/10.29303/jpmpi.v7i4.9848

Kaur, S., Singh, A., Bhatti, M. S., & Sidhu, M. C. (2023). *Eco-safe composite edible coating of hydrocolloids with papaya leaf extract improves postharvest quality and shelf life of papaya fruit under ambient storage. Food Chemistry Advances, 2*, 100248. Elsevier. https://pubmed.ncbi.nlm.nih.gov/38161280/

Koul, B., Pudhuvai, B., Sharma, C., Kumar, A., Sharma, V., Yadav, D., & Jin, J.-O. (2022). *Carica papaya L.: A tropical fruit with benefits beyond the tropics. Diversity, 14*(8), 683. https://doi.org/10.3390/d14080683

Mabberley, D. J. (2017). *Mabberley's plant-book: A portable dictionary of plants, their classification and uses* (4th ed.). Cambridge University Press.

Manullang, R. R., Rusmini, & Daryono. (2017). *Kombinasi mikroorganisme lokal sebagai bioaktivator kompos. Jurnal Hutan Tropis, 5*(3). Politeknik Pertanian Negeri Samarinda.

Marchioro, C. A. (2016). *Global potential distribution of Bactrocera carambolae and the risks for fruit production in Brazil. PLoS ONE, 11*(11), e0166142. https://doi.org/10.1371/journal.pone.0166142

Miranda, M., Bai, J., Pilon, L., Torres, R., Casals, C., Solsona, C., & Teixidó, N. (2024). *Fundamentals of edible coatings and combination with biocontrol agents: A strategy to improve postharvest fruit preservation. Foods, 13*(18). https://doi.org/10.3390/foods13182980

Morsalpour, R., & Rastegar, S. (2025). Innovative coatings of *Aloe vera* gel with salicylic acid and melatonin to preserve mango (*Mangifera indica* L.) fruit quality. *BMC Plant Biology, 25*(1), Article 67. Springer Nature. https://doi.org/10.1186/s12870-025-06785-3

Moura, W. S., Oliveira, E., Haddi, K., Corrêa, R. F. T., & Colleagues. (2021). Cassava starch-based essential oil microparticles preparations: Functionalities in mosquito control and selectivity against non-target organisms. *Industrial Crops & Products, 162*, 113289. https://doi.org/10.1016/j.indcrop.2021.113289

Mubeen, M., Periyanayagam, K., Sathik, S., & Sirugamani, B. (2014). Anatomical investigation on the leaves of *Piper betle* (L.) var. (sgm1) links an ethnomedical important medicinal plant and its pharmacognostic relevance. *International Journal of PharmTech Research, 6*(1), 244–251.

Nita Utami, D., Rosanti, D., & Kartika, T. (2023). Karakteristik morfologi jenis-jenis tanaman obat di Kelurahan Prabujaya Kecamatan Prabumulih Timur Kota Prabumulih. *Indobiosains, 5*(2), 56–65. https://doi.org/10.31851/indobiosains.v5i2.9153

Nurinda, S. (2024). *Pemanfaatan ekstrak daun sirih, daun mengkudu, dan daun pepaya sebagai senyawa anti oviposisi lalat buah Batrocera dorsalis complex pada buah cabai besar (Capsicum annum L.)* [Skripsi, Universitas Hasanuddin]. Kota Makassar.

Nurna, N. (2011). *Pengaruh tingkat kematangan buah pepaya terhadap sifat organoleptik selai yang dihasilkan*. Politeknik Pertanian Negeri Samarinda.

Pereira, V., Figueira, O., & Castilho, P. C. (2024). Flavonoids as insecticides in crop protection—A review of current research and future prospects. *Plants, 13*(6), 776. https://doi.org/10.3390/plants13060776

Permatasari, I. G. A. A., & Dharmaputra, P. K. (2019). Uji efektivitas ekstrak daun sirih (*Piper betle* L.) sebagai repellent terhadap lalat buah (*Bactrocera carambolae*). *Jurnal Agroekoteknologi Tropika, 8*(3), 234–242.

Plant Health Australia. (2018). *The Australian handbook for the identification of fruit flies* (Version 3.1). Plant Health Australia. https://www.fruitflyidentification.org.au

Pramasari, D. A., Supartha, I. W., & Wijaya, I. N. (2020). Potency of several botanical pesticides against carambola fruit fly, *Bactrocera carambolae* Drew & Hancock (Diptera: Tephritidae). *Jurnal Hama dan Penyakit Tumbuhan Tropika, 20*(2), 123–13

Prastya, M. E., Rahardjo, B. T., & Rizali, A. (2022). Insecticidal activity of noni leaf extract (*Morinda citrifolia*) against fruit fly *Bactrocera correcta* (Diptera: Tephritidae). *Journal of Tropical Plant Protection, 4*(2), 89–97.

Pratama, A. W., & Wijaya, I. N. (2020). Potensi beberapa tumbuhan lokal sebagai pestisida nabati untuk pengendalian lalat buah *Bactrocera dorsalis* (Diptera: Tephritidae). *Jurnal Agroekoteknologi Tropika, 13*(1), 78–89.

Priya, K. (2023). Recent advances in edible coating of food products and its thickness classification. *Journal of Food Engineering / Journal of Agriculture and Food Research*. Pudukkottai Road, Thanjavur, India.

Rachmawati, M. (2010). Kajian sifat kimia salak pondoh (*Salacca edulis* Reinw.) dengan pelapisan khitosan selama penyimpanan untuk memprediksi masa simpannya. *Jurnal Teknologi Pertanian, 6*(1), 20–24.

Sanjaya, B. L., Sarmento, R. A., Venzon, M., Viteri Jumbo, L. O., Soares dos Santos, L. S., de Souza Mourá, W., de Souza Carlos Mourão, D., de Sena Fernandes, P. R., Neitzke, T. R., & de Almeida Oliveira, J. V. (2024). *Morinda citrifolia* essential oil: A plant resistance biostimulant and a sustainable alternative for controlling phytopathogens and insect pests. *Biology, 13*(7), 479. https://doi.org/10.3390/biology13070479

Sanjaya, R., & Santori. (2022). Pengembangan insektisida nabati dari tangkai buah lada (*Piper nigrum*) untuk mengurangi penggunaan insektisida kimia. *Journal of Agriculture and Animal Science, 2*(2), 50–57.

Sembiring, E., Frida, E., Sitorus, Z., & Sembiring, T. (2025). Fabrication and characterization of pectin–chitosan edible coatings with a *Cosmos caudatus* leaf extract for tomato preservation. *ACS Omega, 10*(7), 7204–7210. American Chemical Society. https://doi.org/10.1021/acsomega.4c10344

Silue, Y., & Fawole, O. A. (2024). Global research network analysis of edible coatings and films for preserving perishable fruit crops. *Foods, 13*(15), 2321. https://doi.org/10.3390/foods13152321

Siregar, A. F. S. P., Nelly, N., & Gurning, E. Y. S. (2021). Toxicity test of noni (*Morinda citrifolia*) leaf extract against oriental fruit fly (*Bactrocera dorsalis* Hendel). *IOP Conference Series: Earth and Environmental Science, 782*(3), 032014. https://doi.org/10.1088/1755-1315/782/3/032014

Sodiq, M., Sudarmadji, & Sutoyo. (2015). Efektivitas atraktan terhadap lalat buah belimbing di Jawa Timur. *Jurnal Agrotrop, 5*(1), 71–79. ISSN: 2008-155X.

Subedi, K., Regmi, R., Thapa, R. B., & Tiwari, S. 2021. Evaluation of Net House and Mulching Effect on Cucurbit Fruit Fly (Bactrocera cucurbitae Coquillett) on Cucumber (Cucumis sativus L.). Journal of Agriculture and Food Research. 3. https://doi.org/10.1016/j.jafr.2021.100103

Suliartini, N. W. S., Alpin, A. Z., Ashari, M., Amalia, D. R., Alfionita, U., Sari, F. W., Aryatresna, I. G. A. E., Jamila, Z., Aprilia, D. C., Fitria, L., Kirana, A. D. C., Oktoria, A. P., & Pratiassandi, G. (2022). Pelatihan Pembuatan Pestisida Nabati Berbahan Dasar Daun Gamal dan Daun Pepaya Sebagai Inovasi Berkelanjutan dan Ramah Lingkungan Terhadap Pengendalian Hama Tanaman Budidaya. Jurnal Gema Ngabdi, 4(3), 273–278. https://doi.org/10.29303/jgn.v4i3.273

Suryani, R., & Nisa, F. C. (2015). Modifikasi Pati Singkong (Manihot esculenta) dengan Enzim α-Amilase sebagai Agen Pembuih serta Aplikasinya pada Proses Pembuatan Marshmallow. *Jurnal Pangan Dan Agroindustri*, *3*(2), 723–733.

Susanto, A., Nadrawati, I., & Himawan, T. (2017). Sebaran dan keanekaragaman spesies lalat buah di daerah tropis. *Jurnal Hortikultura Indonesia*, 8(2), 112–120.

Suwarno, S., Arianti, L., Rasnovi, S., Yasmin, Y., & Nasir M. (2018). Inventarisasi Lalat Buah (Diptera: Tephritidae) pada Buah-Buahan di Kota Jantho, Aceh Besar. Jurnal Bioleuser. 2 (1) : 5–11

Swastika. (2017). *Buku Budidaya Cabai Merah*. Badan Penerbit Universitas Riau.

Tahiri, A. Y. (2024). *Biopesticide potential of Carica papaya (Caricaceae) and its effects on reproduction.* Biomedical Journal of Scientific & Technical Research, 58(1). https://doi.org/10.26717/BJSTR.2024.58.009107

Tran, V. T., Nguyen, H. T., & Lee, S. (2023). *Recent applications of natural bioactive compounds from plants as environmentally friendly pest management tools: Opportunities and limitations. Journal of Pest Science.* https://doi.org/10.1007/s10340-023-01663-4

Trivadila, T., et al. (2025). *Herbal immunostimulants and their phytochemicals; implications for insecticidal activity.* Journal Plants. Plants, 13;14(6):897. https://doi.org/10.3390/plants14060897

Usni, A., Karo-karo, T., & Yusraini, E. (2016). The Effect of Edible Coating Based on Starch of Cassava Pell on The Quality and Shelf Life of Guava fruits at Room Temperature. 4(3), 293–303.

Virgilio, M., Jordaens, K., Verwimp, C., White, I. M., & De Meyer, M. (2015). Higher phylogeny of frugivorous flies (Diptera: Tephritidae, Dacini): Localised partition conflicts and a novel generic classification. *Molecular Phylogenetics and Evolution, 85*(1), 171–179. https://doi.org/10.1016/j.ympev.2015.02.007

Wakhidya, S. A., Rohman, F., & Setiowati, F. K. (2024). Optimum concentration of using combination of *Laurentia longiflora*, *Carica papaya* and *Cymbopogon citratus* as a biocide on *Bactrocera carambolae* (Prosiding BIOCONF).*ResearchGate.*https://www.researchgate.net/publication/385128126

Widaningrum, W., Miskiyah, M., & Winarti, C. (2015). Edible coating berbasis pati sagu dengan penambahan antimikroba minyak sereh pada paprika: Preferensi konsumen dan mutu vitamin C. *Jurnal Agritech, 35*(1), 53–60. https://doi.org/10.22146/agritech.9419

Zeni, V., Benelli, G., Campolo, O., Giunti, G., Palmeri, V., Maggi, F., Rizzo, R., Lo Verde, G., Lucchi, A., & Canale, A. (2021). Toxics or lures? Biological and behavioral effects of plant essential oils on Tephritidae fruit flies. *Molecules, 26*(19), 5898. https://doi.org/10.3390/molecules26195898