

DAFTAR PUSTAKA

- Adnan, M. (2008). Pengaruh Penyakit Hawar Daun (*Helminthosporium turcicum* PASS.) Terhadap Kehilangan Hasil Tanaman Jagung Manis. [Skripsi]. Fakultas Pertanian, IPB, Bogor.
- Alexopoulos, C. J., & Mims, C. W. (1996). *Introductory Mycology*. Fourth edition John Wiley and Sons. New York.
- Amin, F., Razdan, V. K., Mohiddin, F. A., Bhat, K. A., & Sheikh, P. A. (2010). Effect of Volatile Metabolites of *Trichoderma* Species Against Seven Fungal Plant Pathogens In Vitro. *Jurnal of Phytology*. 2(10), 34 - 37.
- Astuti, S., & Hidayat, R. (2020). Efektivitas *Trichoderma* spp. Terhadap Patogen Penyebab Hawar Daun Jagung (*Exserohilum turcicum*). *Jurnal Pelindungan Tanaman Indonesia*, 24(1), 45-52.
- Azwar, M. S. (2016). Karakterisasi Morfologi dan Fragmen rDNA *Trichoderma* sp. Asal Perkebunan Kakao (*Theobromae cacao* L.) Konawe. [Skripsi]. Fakultas MIPA, Universitas Haluoleo, Kendari.
- Badan Pusat statistik. (2025). Luas Panen, Produksi, & Produktivitas Jagung Menurut Provinsi, 2021-2024. <https://www.bps.go.id/id/statistics-table/2/MjIwNCMy/luas-panen--produksi--dan-produktivitas-jagung-menurut-provinsi.html>. [diakses 25 Februari 2025].
- Badan Penelitian dan Pengembangan Pertanian Pusat dan Pusat Perpustakaan dan Penyebaran Teknologi Pertanian, Bank Pengetahuan Tanaman Pangan Indonesia. (2010). Deskripsi Jagung Hibrida.
- Benatar, G. Z., Nurhayati, Y., & Kulsum, U. (2023). Biological Agent *Trichoderma asperellum* and Its in Vitro Inhibitory Activity Against Mango Fruit Rot Pathogens. *Jurnal Biologi Tropis*, 23(3), 70-75.
- Dennis, C. J. & Webster. (1971). Antagonistic Properties of Species Groups of *Trichoderma*. II. Production of Volatile antibiotics. *Trans. Br. Mycol. Soc*, 57(1), 25-39.
- Druzshinina, I.S., Seidl-Seiboth, V., Herrera-Estrella, A., Horwitz, B. A., Kenerley, C. M., Monte, E., Mukherjee, P. K., Zeilinger, S., Grigoriev, I. V., & Kubicek, C. P. (2011). *Trichoderma*: The Genomics of Opportunistic Success. *Nature Reviews. Microbiology*. (9), 749-759.
- Faizah, A. R. (2017). Potensi Antagonis Jamur dari Endofit Daun Jagung Terhadap *Helminthosporium turcicum*. [Skripsi]. Fakultas Pertanian, Universitas Brawijaya, Malang.

- Gandjar, I. R. A., Samson, K. V., Vermeulen, A., Oetari & I. Santosa. (1999). Pengenalan Kapang Tropik Umum. Yayasan Obor Indonesia, Jakarta.
- Girsang, W., Purba, J., & Daulay, S. (2020). Uji Aplikasi Agens Hayati Tribac mengendalikan Pathogen Hawar Daun (*Helminthosporium* sp.) Tanaman Jagung (*Zea mays* L.). *Jurnal Ilmiah Pertanian*, 17(1), 51-59.
- Hamidson, H., Suwandi, S., & Effendy, T. A. (2019). Perkembangan Beberapa Penyakit Daun Jagung Disebabkan oleh Jamur di Kecamatan Indralaya Utara Kabupaten Ogan Ilir. *Prosiding Seminar Nasional Lahan Suboptimal 2019*. Palembang, 528–534.
- Hernández-Restrepo, M., Madrid, H., Tan, Y. P., da Cunha, K. C., Gené, J., Guarro, J., & Crous, P. W. (2018). Multi-locus Phylogeny and Taxonomy of *Exserohilum*. *Persoonia: Molecular Phylogeny and Evolution of Fungi*, 41, 71–108.
- Indriani, E. (2018). Potensi Antagonisme *Actinomycetes* dari Rizosfer Tanaman Jagung (*Zea mays* L.) Terhadap Patogen *Helminthosporium turcicum* Penyebab Hawar Daun Pada Tanaman Jagung. [Skripsi]. Fakultas Pertanian, Universitas Brawijaya, Malang.
- Jhonson, E. A. (1946). An Improved Slide Culture Techique for The Study and Indentification of Pathogenic Fungi. *Jurnal Bacteriology*, 689-694.
- Komy, M. H., Saleh, A. A., Eranthodi, A., & Molan, Y. (2015). Characterization of Novel *Trichoderma asperellum* Isolates to Select Effective Biocontrol Agents Against Tomato *Fusarium* Wilt. *Plant Pathology Journal*. 31(1), 50-60.
- Kong, W.-L., Ni, H., & Wu, X.-Q. (2022). Antifungal effects of volatile organic compounds produced by *Trichoderma koningiopsis* T2 against *Verticillium dahliae*. *Frontiers in Microbiology*, 13.
- Listiyowati, S., Rustiani, T., & Rahayu, G. (2023). Mekanisme Antagonisme Cendawan Entomopatogen Terhadap *Fusarium oxysporum* f. sp. *cubense* Penyebab Penyakit Panama Pisang. *Jurnal Fitopatologi Indonesia*, 19(3): 99-110.
- Liu, P., Yang, R., Wang, Z., Ma, Y., Ren, W., Wei, D., & Ye, W. (2024). Biocontrol Potential of *Trichoderma asperellum* CMT10 against Strawberry Root Disease. *Horticulturae*, 10(3), 246.
- Lowe, J. L., & Barnett, H. L. (1960). Illustrated Genera of Imperfect Fungi. *Forth Edition*.
- Ma, Y., Li, Y., Yang, S., Li, Y., & Zhu, Z. (2023). Biocontrol Potential of *Trichoderma asperellum* Strain 567 against *Exserohilum turcicum* in *Zea mays*. *Journal of fungi*, 9(9), 25.

- Musa, H., Hassan, M. A. Isyaku, M. S., Halidu, J. & Suleiman, A. S. (2017). Antagonistic Potential of *Trichoderma* Species Against *Ganoderma* Disease of Oil Palm. *Nigerian Journal of Agriculture, Food and Environment*, 13(2), 60-67.
- Mirsam, H., Suraini., Kurniawati, S., Purwanto, O. D., Muis, A., Pakki, S., Tenrirawe, A., Nonci, N., Herawati., Muslimin., & Azra M. (2023). In Vitro Inhibition Mechanism of *Trichoderma asperellum* Isolates From Corn Against *Rhizoctonia solani* Causing Banded Leaf and Sheath Blight Disease and Its Role in Improving The Growth of Corn Seedlings. *Egyptian Journal of Biological Pest Control*, 33-95.
- Naher, L., Yusuf. A., Ismail A. K., & Hossain. (2014). *Trichoderma Harzianum* p.: a Biocontrol Agensiat for Sustainable Management of Plant Diseases. *Pak. J. Bot.* 46(4), 1489-1493.
- Nguemezi, S. T., Sameza, M. L., Anthonia, O. & Fokom, R. (2017). Antagonism of *Trichoderma asperellum* Against Phytophtho Megakarya and It's Potential To Promote Cacao Growth And Induce Biochemical Defense. *Biological Control*.
- Panikkai, S., Nurmalina, R., Mulatsih, S., & Purwati, H. (2017). Analisis Ketersediaan Jagung Nasional Menuju Pencapaian Swasembada Dengan Pendekatan Model Dinamik. *Informatika Pertanian*, 26(1), 41–48.
- Primayuri, D. (2019). Induksi Ketahanan Tanaman Jagung (*Zea mays* L.) Terhadap Patogen *Helminthosporium turcicum* Pass. Dengan Inokulasi Beberapa Jamur Endofit, [Skripsi]. Fakultas Pertanian. Universitas Brawijaya, Malang.
- Ramadani, W. (2023). Tingkat Serangan Penyakit Hawar Daun (*Helminthosporium* sp.) Pada Tanaman Jagung (*Zea mays* L.) Di Kabupaten Pesisir Selatan. [Skripsi]. Fakultas Pertanian. Universitas Andalas, Padang.
- Ruangwong, O. U., Pornsuriya, C., Pitija, K., & Sunpapao, A. (2021). Biocontrol mechanisms of *Trichoderma koningiopsis* PSU3-2 against postharvest anthracnose of chili pepper. *Journal of Fungi*, 7(4), 276.
- Safruddin., Sitopu, J. W., Manurung, A. A., Satria, I., & Wanto, A. (2023). Pengelompokan Produksi Tanaman Jagung di Sumatera Utara Menggunakan Algoritma K-Medoids. *Jurnal Media Informatika Budidarma*, 7(1), 484–491.
- Semangun, H. (2008). *Penyakit-Penyakit Tanaman Pangan di Indonesia*. 2nd Ed. Gadjah Mada University Press, Yogyakarta.

Samuels, G. J., Lieckfeldt, E., & Nirenberg, H. I. (1999). *Trichoderma asperellum*, New Species With Warty Conidia and Redescription of *Trichoderma viride*. *Sydowia*, 51(1), 71-88.

Soenartiningsih., Fatmawati., & Adnan, A. M. (2013). Identifikasi Penyakit Utama pada Tanaman Sorgum dan Jagung di Sulawesi Tengah. *Seminar Nasional Sereala 2013*. Balai Penelitian Tanaman Serelia, 420–432.

Sudantha, I. M. (2010). Pengujian beberapa jenis jamur endofit dan saprofit *Trichoderma* spp. Terhadap penyakit layu *fusarium* pada tanaman kedelai. *Jurnal Agroteksos*, 20(3), 90–102.

Sulaiman, A. A., Kariyasa, I. K., Hoerudin, Subagyo, K., & Bahar, F, A. (2018). *Cara Cepat Swasembada Jagung*. IAARD PRESS, Badan Penelitian dan Pengembangan Pertanian, Jakarta. 140 hlm.

Tyśkiewicz, R., Nowak, A., Ozimek, E., & Jaroszuć-Ścisł, J., (2022). *Trichoderma*: The Current Status of its Application in Agriculture for the Biocontrol of Fungal Phytopathogens and Stimulation of Plant Growth. *International Journal of Molecular Sciences*, 23(4).

Wu, H., Zhang, Y., & Zhang, L. (2008). Proteomic Study of Biocontrol Mechanisms of *Trichoderma harzianum* ETS 323 in Response to *Rhizoctonia solani*. *Journal of Agricultural and Food Chemistry*, 56(16).

