

## DAFTAR PUSTAKA

- Aflaha, I., Amirullah, J.C., Baharuddin., and Kuswinanti, T., 2020. Molecular identification of bacteria causing grain rot disease on rice. IOP Conf. Series: Earth and Environmental Science 486. Plant Pest and Disease Department, Faculty of Agriculture, Universitas Hasanuddin, Makassar, Indonesia.
- Amirullah, J. C. 2019. Uji ketahanan pada beberapa varietas padi yang diinokulasi bakteri patogen *Burkholderia glumae*. Tesis, Universitas Hasanuddin, Makassar.
- Anshar, Muhammad. 2021. Pemanfaatan daerah rawan bencana longsor menjadi lahan pertanian berbasis mitigasi di sulawesi Selatan. Makassar. Pusaka almaida.
- Badan Koordinasi Penyuluhan Provinsi Riau. 2010. Adopsi penerapan teknologi. Sekretariat badan koordinasi penyuluhan provinsi riau. Pekanbaru.
- Baharuddin., Harniati, R., Faisal, F., Yani, A., Suparmi., Hamid, H. et al., 2017. Keberadaan penyakit busuk bulir (*Burkholderia glumae*) pada tanaman padi di sulawesi Selatan. Simposium Fitopatologi Nasional, Bogor.
- BMKG Wilayah IV Makassar. 2022. Peta tipe iklim oldeman dan schmidt-ferguson serta grafik curah hujan tiap tipe iklim di kota/kabupaten provinsi sulawesi Selatan.
- BNPB. 2015. Kajian Risiko Bencana Sulawesi Selatan 2016 – 2020. <https://bpbdsulselprov.go.id/wp-content/uploads/2022/10/KRB-2016-2020.pdf> [Diakses pada 16 Januari 2024].
- BPS. 2023. Luas Panen dan Produksi Padi di Indonesia 2023 (Angka Sementara). Berita Resmi Statistik No.68/10/Th. XXVI, 16 Oktober 2023.
- BPS. 2023. Luas panen dan produksi padi di sulawesi Selatan 2023 (Angka Sementara). Berita Resmi Statistik No.57/11/Th. XXVI, 01 November 2023.
- CABI. 2021. *Burkholderia glumae* [Distribution map]. <https://www.cabidigitallibrary.org/doi/10.1079/DMPD/20210251687>. [Diakses pada 16 Januari 2024].
- Cho, H.S., Park, S.Y., Ryu, C.M., Kim, J.F., Kim, J.G., Park, S.H. 2007. Interference of quorum sensing and virulence of the rice pathogen *Burkholderia glumae* by an endophytic bacterium. Fems Microbiol Ecol, 60: 14–23.
- , Susanna, dan Hakim, L. 2023. Eksplorasi dan Karakterisasi fit Asal Tanaman Padi Sawah di Kabupaten Aceh Besar. Jurnal iswa Pertanian, Volume 8, Nomor 3, Agustus 2023: 550-564.



- Deng, Z., Hung, H. chun, Carson, M. T., Oktaviana, A. A., Hakim, B., & Simanjuntak, T. 2020. Validating earliest rice farming in the Indonesian archipelago. Scientific Reports, 10(1). <https://doi.org/10.1038/s41598-020-67747-3>.
- Echeverri-Rico, J., Petro, E., Fory, P. A., Mosquera, G. M., Lang, J. M., Leach, J. E., Lobaton, J. D., Garcés, G., Perafán, R., Amezquita, N., Toro, S., Mora, B., Cuasquer, J. B., Villegas, J. R., Rebolledo, M. C., & Torres, E. A. 2021. Understanding the complexity of disease-climate interactions for rice bacterial panicle blight under tropical conditions. PLoS ONE, 16(5 May). <https://doi.org/10.1371/journal.pone.0252061>
- Fatmawati. 2017. Studi epidemiologi *Burkholderia glumae*, penyebab Penyakit busuk bulir bakteri (bacterial grain rot) pada pertanaman padi di kabupaten maros. Tesis, Universitas Hasanuddin, Makassar.
- Goszczyńska, T. (2000). Introduction to Practical Phytobacteriology; A manual for phytobacteriology Seed-borne bacterial pathogens of onion View project American foulbrood of honeybees in South Africa View project a safrinet manual for phytobacteriology. <https://www.researchgate.net/publication/237021880>
- Goto, K., and Ohata, K. 1956. New bacterial diseases of rice (bacterial brown stripe and bacterial grain rot). Ann. Phytopathol. Soc. Japan 21:46-47.
- Ham, J.H., Melanson, R.A., Rush, M.C., 2011. *Burkholderia glumae*: Next major pathogen of rice? Mol Plant Pathol. 12(4): 329–339.
- He, P., Wang, C., Zhang, N., Liu, B., Yang, Y., Zhu, Y., Li, X., Yu, X., Han, G., & Wang, Y. Y. 2021. Multi-genotype varieties reduce rice diseases through enhanced genetic diversity and show stability and adaptability in the field. Phytopathology Research, 3(1). <https://doi.org/10.1186/s42483-021-00105-x>
- Hikichi, Y. 1993. Relationship between population dynamics of *Pseudomonas glumae* on rice plants and disease severity of bacterial grain rot of rice\*. In J. Pesticide Sci (Vol. 18).
- Ihsan, M., Agus, F., dan Marisa D.K., 2017. Penerapan metode Dempster-Shafer untuk sistem deteksi penyakit tanaman padi. Fakultas Farmasi, Universitas Mulawarman.
- Iqbal, A., Panta, P. R., Ontoy, J., Bruno, J., Ham, J. H., & Doerrler, W. T. 2021. Chemical or Genetic Alteration of Proton Motive Force Results in Loss of Virulence of *Burkholderia glumae*, the Cause of Rice Bacterial Panicle Blight. Applied and Environmental Microbiology, 87(18), 1–14. <https://doi.org/10.1128/AEM.00915-21>
- Kim, Y. Kang, T. Nagamatsu, and I. Hwang. 2003. Toxoflavin *Burkholderia glumae* causing rice grain rot is responsible for bacterial wilt in many field crops. Plant disease 87: 890–895.



- Karki, K.S., Bisnlu, K., Sherstha., Jae, W.H., Donald, E., Inderjit, K.B. et al., 2012. Diversities in virulence, antifungal activity, pigmentation, and dna fingerprint among strain of *Burkholderia glumae*. The Department of Plant Pathology and Crop Physiology Louisiana State University.
- Kim J, Kim J G, Kang Y, Jang J Y, Jog G J, Lim J Y, Kim S, Suga H, Nagamatsu T, Hwang I. 2004. Quorum sensing and theLysR-tipe transcriptional activator ToxR regulate toxoflavinbiosynthesis and transport in Burkholderia glumae. Mol Microbiol, 54(4): 921–934.
- Kim, N., Kim, J. J., Kim, I., Mannaa, M., Park, J., Kim, J., Lee, H. H., Lee, S. B., Park, D. S., Sul, W. J., & Seo, Y. S. 2020. Type VI secretion systems of plant-pathogenic Burkholderia glumae BGR1 play a functionally distinct role in interspecies interactions and virulence. Molecular Plant Pathology, 21(8), 1055–1069. <https://doi.org/10.1111/mpp.12966>
- Kurita T and Tabei H. 1967. On the patogenic bacterium of bacterial grain rot of rice. Ann. Phyto. Soc. Jap. 33: 111.
- Li, L., Wang, L., Liu, L. M., Hou, Y. X., Li, Q. Q., & Huang, S. W. (2016). Infection Process of Burkholderia glumae Before Booting Stage of Rice. Journal of Phytopathology, 164(10), 825–832. <https://doi.org/10.1111/jph.12502>
- Macknight, C. C. (1983). The rise of agriculture in south sulawesi before 1600. Review of Indonesian and Malaysian Affairs, 17, 92–116.
- Makarim, K. A., dan Suhartatik, E. 2009. Morfologi dan Fisiologi Tanaman Padi. Subang: Balai Besar Penelitian Tanaman Padi.
- Marzali, Amri. 2016. Menulis kajian literatur. Jurnal Etnosia Vol 01. No 02. 27-36. Departemen Antropologi, Fakultas Ilmu Sosial dan Ilmu Politik, Universitas Hasanuddin.
- Mew, T. W., Alvarez, A. M., Leach, J. E., Swings, J. 1993. Focus on bacterial blight of rice. The American Phytopathological Society. Plant disease/ Volume. 77 No. 1.
- Mizobuchi R., Fukuoka S., Tsuiki C., Tsushima S. and Sato H. 2018. Evaluation of major Japanese rice cultivars for resistance to bacterial grain rot caused by *Burkholderia glumae* and identification of standard cultivars for resistance. Breed. Sci. 68: 413–419.
- Mizobuchi, R., Sugimoto, K., Tsushima, S., Fukuoka, S., Tsuiki, C., Endo, M., Mikami, M., Saika, H., & Sato, H. 2023. A MAPKKK gene from rice, RBG1res, confers resistance to *Burkholderia glumae* through negative regulation of ABA. Frontiers in Plant Science, 13(1). <https://doi.org/10.1038/s41598-023-30471-9>
- Chandrasekhar, C., and Verma, G., 2015. Emergence of bacterial panicle blight caused by *Burkholderia glumae* in north india. Plant Dis. 99(9): 1268.
- Amaheswari, C., Lal, S. K., Manjunatha, C., & Berliner, J. (2020). Role of seed transmission and seed infection in major agricultural crops



in India. In *Seed-Borne Diseases of Agricultural Crops: Detection, Diagnosis & Management* (pp. 749–791). Springer Singapore. [https://doi.org/10.1007/978-981-32-9046-4\\_26](https://doi.org/10.1007/978-981-32-9046-4_26)

- Nandakumar, R., Shahjahan, A.K.M., Yuan, X.L., Dickstein, E.R., Groth, D.E., 2009. *Burkholderia glumae* and *B. gladioli* cause bacterial panicle blight in rice in the southern United States. *Plant Dis* 93: 896–905.
- Nurmujahidin, Giyanto, G., & Dadang. 2023. Biological Control of Bacterial Grain Rot Disease Caused by *Burkholderia glumae* Using Actinomycetes. *Jurnal Fitopatologi Indonesia*, 19(2), 63–73. <https://doi.org/10.14692/jfi.19.2.63-73>
- Ortega, L., & Rojas, C. M. 2021. Bacterial panicle blight and *Burkholderia glumae*: From pathogen biology to disease control. In *Phytopathology* (Vol. 111, Issue 5, pp. 772–778). American Phytopathological Society. <https://doi.org/10.1094/PHYTO-09-20-0401-RVW>
- Pedraza, L. A., Bautista, J., and Velez, D. U. 2018. Seed-born *Burkholderia glumae* infects rice seedling and maintains bacterial population during vegetative and reproductive growth stage. *Plant Pathol J.* 34(5):393-402. <https://doi.org/10.5423/PPJ.OA.02.2018.0030>
- Prayudi, B. 2001. Pengendalian Hama-Penyakit Utama Tanaman Padi Berdasar Konsep Pht di Lahan Rawa. <http://repository.pertanian.go.id/handle/123456789/6431>
- Rahman, A., Jahuddin, R., Khusnul, A., Bahar, F., Yani, A., & Patandjengi, B. 2024. *Plant Pests Dis. J. Trop. Plant Pests Dis*, 24(1), 8–14. <https://doi.org/10.23960/j.hptt.1248-14>
- Saddler, G.S., 1994. IMI descriptions of fungi and bacteria, Set 122, Nos 1211-1220. *Mycopathologia*, 128(1): 59–60.
- Salman. 2014. Pengolahan tanah tanaman padi. Pusat Pengembangan dan Pemberdayaan Pendidik dan Tenaga Kependidikan Pertanian. Cianjur.
- Sayler, R.J., Cartwright, R.D., and Yang, Y., 2006. Genetic characterization and real-time pcr detection of *Burkholderia glumae* , a newly emerging bacterial patogen of rice in the united states. *Plant Disease*, 90(5), 603–610. <https://doi.org/10.1094/PD-90-0603>.
- Schaad, N.W., Jones, J.B., and Chun, W., 2001. Laboratory guide for identification of plant pathogenic bacteria. 3rd Ed.: The American Society of Phytopathological Society Press.



Optimization Software:  
[www.balesio.com](http://www.balesio.com)

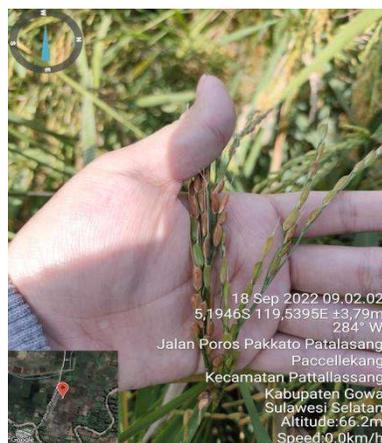
Coyne, D. P. 1974. Survival mechanisms of phytopathogenic bacteria. <https://digitalcommons.unl.edu/plantpathpapers>

Al-Morat, A., Nalley, L. L., Zhou, X. G., Rojas, C., & Thoma, G. 2024. Nitrogen fertilizer application increases bacterial panicle blight (*Burkholderia glumae*)

- occurrences and impacts on USA rice production. PLoS ONE, 14(7). <https://doi.org/10.1371/journal.pone.0219199>
- Singh, D. 2015. Identification of a seed-borne rice bacterium, *Burkholderia glumae* using cultural, morphological and biochemical methods. In Journal of Applied and Natural Science (Vol. 7, Issue 2). [www.ansfoundation.org](http://www.ansfoundation.org)
- Somba, N., Mansyur, S., & Nur, M. (2019). Mistifikasi ritual sistem pertanian tradisional masyarakat ajatappareng, Sulawesi Selatan. Jurnal Walennae, 17(1), 19. <https://doi.org/10.24832/wln.v17i1.365>
- Tripathi, K, K, O. P Govila, Ranjini warrier., Vibha Ahuja, 2011. Biology of *Oryza sativa* L. (Rice). India: Department of biotechnology ministry of science & technology Government of India.
- Tsushima, S., Naito, H., and Koitabashi, M. 1996. Population dynamics of *Pseudomonas glumae*, the casual agent of bacterial grain rot of rice, of rice sheaths of rice plant in relation to disease development in the field. Ann. Phytopathol. Soc. Jpn. 62:108-113.
- Tsushima, Seiya. 2011. Study on control and epidemiology of bacterial grain rot of rice. Jpn. J. Phytopathol. 77: 137–139.
- Uematsu, T., Yoshimura, D., Nishiyama, K., Ibaraki, T. and Fujii, H. 1976. Pathogenic bacterium causing seedling rot of rice. stripe and bacterial grain rot). Ann. Phytopathol. Soc. Japan 42:464-471.
- Urakami, T., C. Ito-Yoshida, H. Araki, T. Kijima, K-I. Suzuki, and K. Komagata. 1994. Transfer of *Pseudomonas plantarii* and *Pseudomonas glumae* to *Burkholderia* as *Burkholderia* spp. and description of *Burkholderia vandii* sp. nov. Int. Journ. OfSystematic Bact. 44 (2): 235-245.
- USDA Foreign Agricultural Service. 2023. Indonesia grain and feed annual. Report Number ID2023-0006.
- Wati, Herlina, dan Charina Chazali. 2015. Sistem pertanian padi indonesia dalam perspektif efisiensi sosial. AKATIGA.
- Widarti, A., Giyanto, G., & Mutaqin, K. H. (2020). Incidence of Bacterial Grain Rot Disease, Identification, and Diversity of *Burkholderia glumae* in Some Rice Varieties in West Java. Jurnal Fitopatologi Indonesia, 16(1), 9–20. <https://doi.org/10.14692/jfi.16.1.9-20>
- Zhou, Xin-Gen. 2019. Sustainable Strategies for Managing Bacterial Panicle Blight in <https://doi.org/10.1155/2019/84882>.
- Zhu, S. F., Zhao, W. J., Peng, Z., Liu, H. X., Zhong, W. Y. 2010. DHPLC for detection Of *Burkholderia glumae*.Acta Phytopathol 9–455.



## LAMPIRAN GAMBAR



Optimization Software:  
[www.balesio.com](http://www.balesio.com)

1. Gejala penyakit busuk bulir bakteri pada pertanaman padi di  
Pattalassang, Kabupaten Gowa, Sulawesi Selatan



**Gambar Lampiran 2.** Bulir padi bergejala penyakit busuk bulir bakteri

