

- Adam, M. H. 1959. *Bacteriophage*. New York: Interscience Publishers, Inc.
- Fujiwara, A., M. Fujisawa, R. Hamasaki, T. Kawasaki, M. Fujie, T. Yamada. 2011. Biocontrol of *Ralstonia solanacearum* by Treatment with Lytic Bacteriophages^{v†}. *Applied and environmental microbiology* 77(12): 4155–4162
- Arias, A, K.M. 2000. Investigasi Dan Pengendalian Wabah Di Fasilitas Pelayanan Kesehatan. USA:EGC.
- Arwiyanto, T. 2014. *Ralstonia solanacearum Biologi, Penyakit yang Ditimbulkan, dan Pengelolaannya*. Yogyakarta: Gadjah Mada University Press.
- Badan Karantina Pertanian. 2008. Pedoman Diagnosis OPTK Golongan Bakteri.
- Badan Pusat Statistik Indonesia. 2021. Statistik Tanaman Biofarmaka Indonesia. Badan Pusat Statistik, Jakarta.
- Balogh, B., F. Iriarte, J. Jones, M. T. Momol. 2010. Phage Therapy for Plant Disease Control. *Current Pharmaceutical Biotechnology* 11: 48-57.
- Brown, J. F., P. Keane. 1997. Assessment of disease and effects on yield. In: Plant Pathogens and Plant Diseases, Brown, J. F., Ogle, H. J. (Eds.). Australasian Plant Pathology Society.
- Choliq, F. A., M. Martosudiro, Istiqomah, M. F. Nijami. 2020. Isolasi dan uji kemampuan bakteriofag sebagai agens pengendali penyakit layu bakteri (*Ralstonia solanacearum*) pada tanaman tomat. *Jurnal Viabel Pertanian* 14(1): 8-20.
- Dake, G. N. (1995). Diseases of ginger (*Zingiber officinale* Rosc.) and their management. *Journal of Spices and Aromatic Cops*, 4(1), 40-48.
- FAO. 2021. Production of Ginger: top 10 producers 2019. [<http://www.fao.org/faostat/en/#data/QCL/visualize>] diakses pada tanggal 26 Desember 2021.
- Gunaeni, N., W. Setiawati, Y. Kusandriani. 2014. Pengaruh perangkap likat kuning, ekstrak *Tagetes erecta*, dan imidacloprid terhadap perkembangan vektor kutukebul dan virus

kuning keriting pada tanaman cabai merah (*Capsicum annum* L.). *J Hort* 24(4):346-354.

Gill ,J.J., S.T. Abedon. 2003. Bacteriophage ecology and plants. [<http://www.apsnet.org/publications/apsnetfeatures/Pages/BacteriophageEcology.aspx>] diakses 26 Desember 2021.

Hakim, L. 2015. *Rempah dan Herba Kebun-Pekarangan Rumah Masyarakat: Keragaman, Sumber Fitofarmaka, dan Wisata Kesehatan-Kebugaran*. Yogyakarta: Diandra Pustaka Indonesia.

Hanumanthappa, M., M. Palaniswamy, J. Angayarkanni. 2013. Isolation of lytic bacteriophage against *Ralstonia solanacearum* causing wilting symptoms in ginger (*Zingiber officinale*) and potato (*Solanum tuberosum*) plants. *International Research Journal of Biological Sciences*, 2(11), 78-84.

Harwati, T. 2009. Khasiat Jahe bagi Kesehatan. *INNOFARM: Jurnal Inovasi Pertanian*, 8(1), 54-61.

Iriarte, F.B., A. Obradovic, M.H. Wernsing, L.E. Jackson, B. Balogh, J.A. Hong, M.T. Momol, J.B. Jones, G.E. Vallad. 2012. Soil-based systemic delivery and phyllosphere in vivo propagation of bacteriophages: two possible strategies for improving bacteriophage efficacy for plant disease control. *Bacteriophage*, 2(4):215-224;

Jaidka, M. K. 2018. *Scientific Cultivation of Gingers (Zingiber officinalis)*

Jones, J. B., G.E. Vallad, F. B. Iriarte, A. Obradovic, M. H. Wernsing, L.E. Jackson. 2012. Considerations for using bacteriophages for plant disease control. *Bacteriophage*, 208-214.

Johnson, K.B. 1994. Dose–response relationships and inundative biological control. *Phytopathology*, 84:780-784.

Kurtböke, I. 2012. *Bacteriophage*. Croatica: InTech.

Mangunwardoyo, W, R. Ismayasari, dan E. Riani. 2010. Uji patogenisitas dan virulensi *Aeromonas hydrophila* Stanier pada ikan nila (*Oreochromis niloticus* Lin.) melalui postulat Koch. *J. Ris. Akuakultur* 5 (2): 245-255

- Mutimawurugo, M.C., I. N. Wagara, J. B. Muhinyuzal and J. O. Ogweno. 2019. Virulence and characterization of isolates of potatobacterial wilt caused by *Ralstonia solanacearum*(Smith) in Rwanda. *African Journal of Agricultural Research*14(6): 311-320
- Nasrudin, A., A. Rosmana. 2007. Pengukuran Penyakit Tanaman. [http://pasca.unhas.ac.id/Web_Epid/kul10/page3.html] diakses 18 November 2021.
- Ravindra, P. N., & Babu, K. N. (2016). *Ginger The Genus Zingiber*. Florida: CRC Press.
- Rukmana, R. (2000). *Usaha Tani Jahe*. Yogyakarta: Kanisius.
- Salmond, G. P., & Fineran, P. C. (2015). A Century of the Phage: Past, Present, and Future. *Nature Reviews Microbiology*, 13, 777-786.
- Sanders, E. R. 2012. Aseptic Laboratory Techniques: Plating Methods. *J. Vis. Exp.* (63). e3064
- Semangun, H. (1989). *Penyakit - Penyakit Tanaman Hortikultura di Indonesia*. Yogyakarta: Gadjah Mada University Press.
- Setiawan, A. D. (2002). Keragaman Varietas Jahe (*Zingiber officinale* Rosc.) berdasarkan Kandungan Kimia Minyak Atsiri. *BioSmart*, 4(2), 48-54.
- Setyaningrum, H. D., & Saparinto, C. (2013). *Jahe*. Jakarta: Penebar Swadaya.
- Syukur, C. 2002. Agar Jahe berproduksi Tinggi: Cegah Layu Bakteri dan Pelihara secara Intensif. Penebar Swadaya, Jakarta.
- Taj, M. K., J. X. Ling, L. L. Bing, Z. Qi, I. Taj, T. M. Hassani, Z. Samreen, W. Yunlin. 2014. Effect of dilution, temperature and ph on the lysis activity of T4phage against *E.Coli* BL21. *The Journal of Animal and Plant Science*, 24(4): 1252-1255.
- Worley-Morse, T. O., L. Zhang, C. K. Gunsch. 2014. The long-term effects of phage concentration on the inhibition of planktonic bacterial cultures. *Environ Sci Process Impacts*16(1):81-7.
- Xu, Xiangming. 2006. Modelling and interpreting disease progress in time. *The Epidemiology of Plant Diseases*



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Yuhani, S., & Kailaku, S. I. (2009). Pengembangan Produk Jahe Kering dalam Berbagai Jenis

Industri. *Buletin Teknologi Pascapane Pertanian*, 5, 61-68.