

DAFTAR PUSTAKA

- Abera, Amsalu, Fikre Lemessa, dan Girma Adunga. 2016. Morphological Characteristics of *Colletotrichum* Species Associated with Mango (*Mangifera indica* L.) in Southwest Ethiopia. *Food Science and Quality Management* 48 : 106-115.
- Agrios, G.N. 2005. *Plant Pathology* (5th Ed.). Elsevier Academic Press, Burlington.
- Airaki, M., Leterrier, M., Mateos, R.M., Valderrama, R., Chaki, M., Barroso, J.B., del Río, L.A., Palma, J.M., dan Corpas, F.J. 2012 Metabolism of reactive oxygen species and reactive nitrogen species in pepper (*Capsicum annum* L.) plants under low temperature stress. *Plant Cell Environ.* 35: 281–295.
- Andan, T. PhD , A. Chdanrasekaran, S. Kuttalam , T. Raguchdaner , V. Prakasam, dan R. Samiyappan. 2008. Association of some plant defense enzyme activities with systemic resistance to early leaf blight and leaf spot induced in tomato plants by azoxystrobin and *Pseudomonas fluorescens*. *Journal of Plant Interactions* 2 : 233-244.
- Anonim. 2013. OR Twist 42. <<http://orientalseed.co.id>>. Diakses pada 20 April 2019.
- Assis, J.S., Maldonado, R., Munoz, T., Escribano, M.I., dan Merodio, C.. 2001. Effect of high carbon dioxide concentration on PAL activity and phenolic contents in ripening cherimoya fruit. *Postharvest Biol. Technol.* 23: 33-39.
- Avasthi S, Gautam AK, dan Bhadauria R. 2011. First report of anthracnose disease of *Aloe vera* caused by *Colletotrichum gloeosporioides*. *J.Res Biol* 6: 408-410.
- Badawy M.E.I. dan Rabea E.I. 2011. A biopolymer chitosan and its derivatives as promising antimicrobial agents against plant pathogens and their applications in crop protection. *Int. J. Carbohydr. Chem.*
- Bailey, J. A., O’Connell, R. J., Pring, R. J., dan Nash, C. 1992. Infection strategies of *Colletotrichum* species. In: *Colletotrichum, Biology, Pathology and Control*. J. A. Bailey and M. Jeger, eds. CAB Int., Oxford. Pp. 88-120.
- Bhaskara Reddy, B.M.V., Arul J., Angers P., dan Couture L. 1999. Chitosan treatment of wheat seeds induces resistance to *Fusarium graminearum* and improves seed quality. *J. Agric. Food Chem.* 47 :1208–1216.

- Ben-Shalaom, N, Ardi R, Pinto R, Aki C, dan Fallik E. 2003. Controlling gray mould caused by *Botrytis cinerea* in cucumber plants by means of chitosan. *Crop Protect* 22 : 285–90.
- Biemelt, S., Tschiersch, H., dan Sonnewald, U. 2004. Impact of altered gibberellin metabolism on biomass accumulation, lignin biosynthesis, and photosynthesis in transgenic tobacco plants. *Plant Physiol.* 135 : 254-265.
- Bittelli M, Flury M, Campbell GS, dan Nichols EJ 2001. Reduction of transpiration through foliar application of chitosan. *Agricultural and Forest Meteorology* 107: 167-175.
- Bozzola, J.J dan Russel, L.D. 1998. *Electron Microscopy: Principles dan Techniques for Biologists*. Jones and Barlett Publishers, Sudbury.
- Caires, N.P., D.B. Pinho, J.S.C. Souza, M.A. Silva, D.O. Lisboa, O. L. Pereira, dan G.Q. Furtado. 2014. First report of anthracnose on pepper fruit caused by *Colletotrichum scovillei* in Brazil. *Plant Disease* 98 : 1437.
- Cannon, P.F., Damm, U., Johnston, P.R., dan Weir, B.S. 2011. Morphology, molecular phylogeny and pathogenicity of *Colletotrichum panacicola* causing anthracnose of Korean ginseng. *Plant Pathol. J.* 27 : 1-7.
- Chdanra, Nilanjan Chakraborty, Adhiraj Dasgupta, Joy Sarkar, Koustubh Pdana, dan Krishnendu Acharya. 2014. Abiotic elicitor-mediated improvement of innate immunity in *Camellia sinensis*. *J. Plant Growth Regul.* 33 : 849–859.
- Chdanra, Swarnendu, Nilanjan Chakraborty, Adhiraj Dasgupta, Joy Sarkar, Koustubh Pdana, dan Krishnendu Acharya. 2015. Chitosan nanoparticles: a positive modulator of innate immune responses in plants. *Scientific Reports*. DOI: 10.1038/srep15195.
- Chatterjee S., Chatterjee B.P., Guha A.K. 2014. A study an antifungal activity of water-soluble chitosan against *Macrophomina phaseolina*. *Int J Biol Macromol.* 67:452–457.
- Choi, Y.W., Hyde, K. D., dan Ho, W. H. 1999. Single spore isolation of fungi. *Fungal Diversity* 3: 29–38.
- Chowdappa, Pallem, Gaddam Subhash Reddy, Ashok Kumar, B. Madhusudhan Rao, dan Ram D. Rawal. 2009. Morphological dan molecular characterization of *Colletotrichum* species causing Anthracnose of grape in India. *The Asian and Australasian Journal of Plant Science dan Biotechnology* 3 : 71-77.

- Chowdappa, Pallem, Chabanahalli Somashekar Chethana, Reddi Bharghavi, Hanumanthappa Sdanhya, Rajendra Prasad Pant. 2012. Morphological and molecular characterization of *Colletotrichum gloeosporioides* (Penz) Sac. isolates causing anthracnose of orchids in India. Research Article, Biotechnol. Bioinf. Bioeng. 2 : 567 – 572.
- Cooke, B.M.. 2006. Disease Assessment and Yield Loss. In: Cooke, B.M., D.G. Jones dan B. Kaye. The Epidemiology of Plant Diseases 2n Edn. Springer, Netherldans, ISBN: 10 1-4020-4580-8, pp: 43-80.
- Corsi B., Riccioni L. dan Forni C. 2015. In vitro cultures of *Actinidia deliciosa* (A. Chev) C.F.Liang, dan A.R. Ferguson: a tool to study the SAR induction of chitosan treatment. Org. Agric. 5:189–198.
- Damm U., Cannon, P. F., Woudenberg, J. H.C, dan Crous, P. W. 2012. The *Colletotrichum acutatum* species complex. Studies in Mycology 73 : 37–113.
- Des Rieux, A., Fievez, V., Garinot, M., Schneider, Y.J., dan Pr at, V. 2006. Nanoparticles as potential oral delivery systems of proteins and vaccines: a mechanistic approach. J. Control. Release 116 : 1–27
- De Siva, D.D., P.K. Ades, P.W. Crous, dan P.W.J. Taylor. 2017. *Colletotrichum* species associated with chili anthracnose in Australia. Plant Pathology 66 : 254-267.
- Doyle JJ dan Doyle JL. 1990. Isolation of plant DNA from fresh tissue. Focus 12:13–15.
- Fan, Wen, Wei Yan, Zushun Xu, dan Hong Ni. 2012. Formation mechanism of monodisperse, low molecular weight chitosannanoparticles by ionic gelation technique. Colloids and Surfaces B: Biointerfaces 90 : 21-27. DOI:10.1016/j.colsurfb.2011.09.042.
- Farr DF, Aime MC, Rossman AY, dan Palm ME 2006. Species of *Colletotrichum* on *Agavaceae*. Mycol Res 110 : 1395-1408.
- Farouk S, Ghoneem KM, dan Ali Abeer A. 2008. Induction and expression of systematic resistance to downy mildew disease in cucumber plant by elicitors. Egyptian Journal of Phytopathology 1-2 : 95-111
- Farouk S, Mosa AA, Taha AA, dan Ibrahim Heba M, EL-Gahmery AM. 2011. Protective effect of humic acid and chitosan on radish (*Raphanus sativus* L. var. *sativus*) plants subjected to cadmium stress. Journal of Stress Physiology and Biochemistry 7:99-116.

- Freeman S, Katan T, dan Shabi E. 1998. Characterisation of *Colletotrichum gloeosporioides* isolates from avocado, and almond fruits with molecular and pathogenicity test. *Applied and Environmental Microbiology* 62 : 1014-1020.
- Freeman, S., Shabi, dan E., Katan, T. 2000. Characterization of *Colletotrichum acutatum* causing anthracnose of anemone (*Anemone coronaria* L.) *Appl. Environ. Microbiol.*, 66 :5 267 5272.
- Feng, B.H. dan Peng, L.F. 2012. Synthesis and characterization of carboxymethyl chitosan carrying ricinoleic functions as an emulsifier for azadirachtin. *Carbohydr. Polym.* 88 : 576–582.
- Gautam, Ajay Kumar, Shubhi A., dan Rekha B, 2012. First report of *Colletotrichum gloeosporioides* on *Pedilanthus tithymaloides* in India. *Journal on New Biological Reports* 1: 03-05.
- Geisberger, G., Gyenge, E.B., Hinger, D., Käch, A., Maake, C., dan Patzke, G.R. 2013. Chitosan-thioglycolic acid as a versatile antimicrobial agent. *Biomacromolecules* 14 : 1010–1017.
- Ghoname AA, EL-Nemr MA, Abdel-Mawgoud AMR, dan El-Tohamy WA. 2010. Enhancement of sweet pepper crop growth and production by application of biological, organic dan nutritional solutions. *Research Journal of Agriculture dan Biological Science* 67: 349-355.
- Grahovac M., Tanović B., Hrustić J., Indić D., dan Vuković S. 2010. Patogeni iz roda *Colletotrichum* na uskladištenim plodovima jabuke: X Conference on Plant Protection. – Zlatibor, Serbia.
- Grahovac M., Dušanka Indić, Slavica Vuković, Jovana Hrustić, Sonja Gvozdenac, Milica Mihajlović, dan Brankica Tanović. 2012. Morphological and ecological features as differentiation criteria for *Colletotrichum* species. *Žemdirbystė Agriculture* 99 : 189-196.
- Grimm, Bernhard, Yekti Asih Purwestri, Tri Rini Nuringtyas, Febri Adi Susanto, Dabiel Hey, dan Josephine Herbst. 2017. Basic Methods in Plant Molecular Biology and Plant Physiology. In *Binational Practical Course at Universitas Gadjah Mada Oktober 2017*.
- Grillo, R., Pereira, A.E.S., Nishisaka, C.S., de Lima, R., Oehlke, K., Greiner, R., dan Fraceto, L.F. 2014. Chitosan/tripolyphosphate nanoparticles loaded with paraquat herbicide: An environmentally safer alternative for weed control. *J. Hazard. Mater.* 278 : 163–171.

- Guan Ya-jing, Jin Hu, Xian-ju Wang, dan Chen-xia Shao. 2009. Seed priming with chitosan improves maize germination and seedling growth in relation to physiological changes under low temperature stress. *Journal of Zhejiang University Science B* 10 : 427-433.
- Hadwiger, L.A. dan Polashock J. 2013 Fungal mitochondrial DNases: effectors with the potential to activate plant defences in non-host resistance. *Phytopathology*. 103:81–90.
- Hammerschmidt R, Nuckles EM, Kuc J. 1982. Association of enhanced peroxidase activity with induced systemic resistance of cucumber to *Colletotrichum lagenarium*. *Physiol Plant Pathol* 20:73 - 82.
- Hao, Z. Lianping Wang, Yueping He, Jiangen Liang, dan Rongxiang Tao. 2011. Expression of defense genes and activities of antioxidant enzymes in rice resistance to rice stripe virus and small brown planthopper. *Plant Physiology and Biochemistry* 49 : 744-751.
- Hartee EF. 1955. Haematin compounds. In: Peach K, Tracy M, editors. *Modern methods of plant analysis*. Springer-Verlag, New York : pp 197-245.
- Ibrahim, R., Sri Hendrastuti Hidayat, dan` Widodo. 2017. Keragaman morfologi, genetika, dan patogenisitas *Colletotrichum acutatum* penyebab antraknosa cabai di Jawa dan Sumatera. *Jurnal Fitopatologi Indonesia* 13 : 9-16.
- Ippolito, A., El Ghaouth, A., Wilson, C.L., dan Wisniewski, M. 2000. Control of postharvest decay of apple fruit by *Aureobasidium pullulans* and induction of defense responses. *Postharvest Biol. Technol.* 19 : 265-272.
- Iriti, M. dan Faoro F. 2009. Chitosan as a MAMP, searching for a PRR. *Plant Signaling And Behavior* 4 : 66–68.
- Jadhav SK, Diwakar MP, Sawant UK, dan Kadam J.J. 2008. Management of leaf spot disease of Kokum (*Garcinia indica*) incited by *Colletotrichum gloeosporioides* Penz. *J. Plant Disease*
- Jeffries, P., J.C. Dodd, M. J.Jeger, dan R.A. Plumbley. 1990. The biology and control of *Colletotrichum* species on tropical fruit crops. *Plant Pathology* 39 : 343-366.
- Karimi S, Abbaspour H, Sinaki JM, dan Makarian H. 2012. Effects of water deficit dan chitosan spraying on osmotic adjustment and soluble protein of cultivars castor bean (*Ricinus communis* L.). *Journal of Stress Physiology and Biochemistry* 8: 160-169.

- Kanto T., Uematsu S., Tsukamoto, T, Moriwaki J., Yamagishi, N., Usami T., dan Sato, T. 2014. Anthracnose of sweet pepper caused by *Colletotrichum scovillei* in Japan. *J. Gen. Plant Pathol.* 80 : 73-78.
- Kato, M., Hayakawa, Y., Hyodo, H., Ikoma, dan Y., Yano, M., 2000. Wound-induced ethylene synthesis dan expression and formation of 1-aminocyclopropane-1-carboxylate (ACC) synthase, ACC oxidase, phenylalanine ammonia-lyase, dan peroxidase in wounded mesocarp tissue of *Cucurbita maxima*. *Plant Cell. Physiol.* 41 : 440-447.
- Khan MH, Singha KLB, dan Pdana SK. 2002. Changes in antioxidant levels in *Oryza sativa* L. roots subjected to NaCl salinity stress. *Acta Physiol. Plantarum* 24:145–148.
- Kleemann J, Rincon-Rivera L J, Takahara H, Neumann U, van Themaat EVL, van der Does HC, Hacquard S., Stüber K., Will I., Schmalenbach W., Schmelzer E., O’Connell RJ . 2012. Sequential delivery of host-induced virulence effectors by appressoria and intracellular hyphae of the phytopathogen *Colletotrichum higginsianum*. *PLoS Pathog.* 8 : e1002643. DOI: 10.1371/journal.ppat.1002643.
- Kranz, J., 1988. Measuring Plant Disease. In: *Experimental Techniques in Plant Disease Epidemiology*, Kranz J. dan J. Rotem (Eds.). Springer, Berlin, ISBN: 978-0-387-18128-8, pp: 35-50.
- Kumar A, Singh DP, dan Singh P. 1994. Influence of water stress on photosynthesis, transpiration, water use efficiency and yield of *Brassica juncea* L. *Field Crops Research* 37 : 95-101.
- Kumar, A. B. V., Varadaraj, M. C., Gowda, L. R., dan Tharanathan, R. N. 2005. Characterization of chito-oligosaccharides prepared by chitosan analysis with the aid of papain and Pronase, and their bactericidal action against *Bacillus cereus* and *Escherichia coli*. *Biochem. J.* 391 : 167-175.
- Kumar, Saket. Vineeta Singh, dan Ruchi Garg. 2015. Cultural and morphological variability in *Colletotrichum capsici* causing anthracnose disease. *Int. J. Curr. Microbiol. App. Sci* 4 : 243-250.
- Lay FT. dan Danerson MA. 2005. *Defensins*—components of the innate immune system in plants. *Curr Prot Pept Sci* 6:85-101.
- Li, S.J. dan Zhu T.H. 2013. Biochemical response and induced resistance against anthracnose (*Colletotrichum camelliae*) of camellia (*Camellia pitardii*) by chitosan oligosaccharide application. *For. Path.* 43:67–76.

- Lin, A. H., Liu, Y. M. dan Ping, Q. N. 2007. Free amino groups on the surface of chitosan nanoparticles and its characteristics. *Yao Xue Xue Bao* 42 : 323-328 .
- Liu, F., Tang, G., Zheng, H., Li, Y., Sun, X., Qi, X., Zhou, Y., Xu, J., Chen, H., Chang, X., Zhang, S., and Gong, G. 2016. Molecular and phenotypic characterization of *Colletotrichum* species associated with anthracnose disease in peppers from Sichuan Province, China. *Scientific Reports* 6 : 32761 DOI: 10.1038/srep32761.
- Mandanhar, J.B., Hartman, G.L., Wang, dan T.C. 1995. Anthracnose development on pepper fruits inoculated with *Colletotrichum gloeosporioides*. *Plant Dis.*79: 380-383.
- Mercado, J.A., Reid, M.S., Valpuesta, V., dan Quesada, M.A. 1997. Metabolic changes and susceptibility to chilling stress in *Capsicum annuum* L. plants grown at suboptimal temperature. *Aust. J. Plant Physiol.* 24 : 759–767.
- Milla, A. 2006. *Capsicum de capsia*, cápsula: el pimiento. *Pimientos*, Compendios de Horticultura. p. 21-31.
- Mills, PR, Screnivasaprasad S, dan Brown AE. 1992. Detection and differentiation of *Colletotrichum gloeosporioides* isolates using PCR. *FEMS Microbiology Letters* 98 : 137-144. .In : Bailey JA dan Jeger MJ. 1992. *Colletotrichum* : Biology, Pathology and Control. CAB International Mycological Institute, UK.
- Mongkolporn, O. dan P.W.J. Taylor. 2018. Chili anthracnose : *Colletotrichum* taxonomy and pathogenicity : Review. *Plant Pathology* 67 : 1255-1263.
- Montri, P., Taylor, P.W.J. dan Mongkolporn, O. 2009. Pathotypes of *Colletotrichum capsici*, the causal agent of chili anthracnose, in Thailand. *Plant Dis.* 93: 17–20.
- Nishiuchi, T., Masuda, D., Nakashita, H., Ichimura, K., Shinozaki, K., Yoshida, S., Kimura, M., Yamaguchi, I., dan Yamaguchi, K. 2006. *Fusarium* phytotoxin trichothecenes have an elicitor-like activity in *Arabidopsis thaliana*, but the activity differed significantly among their molecular species. *Mol. Plant Microbe Interact.* 19 : 383-390.
- Noireung, P., Phoulivong, Liu, F., Cai, L., McKenzie, E.H.C., Chukeatirote, E., Jones, E.B.G., Bahkali, A., dan Hyde, K.D. 2012. Novel species of *Colletotrichum* revealed by morphology and molecular analysis. *Cryptogamie, Mycol.* 33: 347-362.

- Oku, H., Shiraishi, T., dan Ouchi, S. 1987. Role of specific suppressors in pathogenicity of *Mycosphaerella species*. In: Molecular Determinants of Plant Disease. S. Nishimura, ed. SpringerVerlag, Berlin. Pp. 145-156.
- Oñate-Sánchez, Luis dan Jesús Vicente-Carbajosa. 2008. DNA-free RNA isolation protocols for *Arabidopsis thaliana*, including seeds and siliques. BMC Research Notes. DOI:10.1186/1756-0500-1-93.
- Oo, M.M., Gi Taek Lim, Hyun A Jang, dan Sang-Keun Oh. 2017. Characterization and pathogenicity of new record of anthracnose on various chili varieties caused by *Colletotrichum scovillei* in Korea. Mycobiology 45 : 184-191.
- Orzali L., Forni C. dan Riccioni L. 2014. Effect of chitosan seed treatment as elicitor of resistance to *Fusarium graminearum* in wheat. Seed Sci. Technol. 42:132–149.
- Pakdeevvaraporn, S. Wasee, P. W. J. Taylor, dan O. Mongkolporn. 2005. Inheritance of resistance to anthracnose caused by *Colletotrichum capsici* in *Capsicum*. Plant Breeding 124 : 206—208.
- Pardo , E. M., C. F. Grellet, S. M. Salazar, A. P. Castagnaro, J. C. Díaz Ricci, dan M. E. Arias. 2012. Histopathology of the resistance to *Colletotrichum gloeosporioides* of wild strawberries and species related to commercial strawberry. AJCS 6 :1147-1153.
- Park, Kyungseok., Yong-Soon Park, Jamal Ahamed, Swarnalee Dutta, Hojin Ryu, Seo-Hyun Lee, Kotnala Balaraju, Maniruzzaman Manir, dan Surk-Sik Moon. 2016. Elicitation of induced systemic resistance of chili pepper by iturin A analogs derived from *Bacillus vallismortis* EXTN-1. Can. J. Plant Sci. 96: 564–570.
- Pawar, S.S., N.V. Bharude, S.S.Sonone, R.S.Deshmukh, A.K.Raut, dan A.R.Umarkar. 2011. Chillies as food, spice and medicine : a perspective. International Journal of Pharmacy and Biological Sciences 3 : 311-318.
- Peres NAR, Kuramae EE, Dias MSC, dan de Sousa NL. 2002. Identification dan characterization of *Colletotrichum* spp. affecting fruit after harvest in Brazil. Journal of Phytopathology 150 : 128–34.
- Pérez-Castañeda, L., M.G., Castañón-Nájera, y N., and Mayek-Pérez. 2008. Diversidad morfológica de chiles (*Capsicum* spp.) de Tabasco, México. Cuadernos de Biodiversidad 27. p. 11-22.

- Piggott, N., Ekramoddoullah, A.K.M., Liu, J.J., dan Yu, X. 2004. Gene cloning of a thaumatin-like (PR-5) protein of western white pine (*Pinus monticola* D.Don) and expression studies of members of the PR-5 group. *Physiol. Mol. Plant Pathol.* 64 : 1-8.
- Prado, U.G. 2008. Caracterización morfológica in situ y capacidad germinativa en poblaciones silvestres de *Capsicum* spp. del estado de Tabasco, México. Tesis MSc. Colegio de Postgraduados, Campus Tabasco, Tabasco, México.
- Prego, C., Garcia, M., Torres, D., dan Alonso, M.J. 2005. Transmucosal macromolecular drug delivery. *J. Control. Release* 101: 151–162
- Prihastuti, H., Cai, L., Chen, H., McKenzie, E.H.C., dan Hyde, K.D. 2009. Characterization of *Colletotrichum* species associated with coffee berries in northern Thailand. *Fungal Diversity* 39: 89-109.
- Prusky, D. dan Plumbley, R.A. 1992. Quiescent infections of *Colletotrichum* in tropical and subtropical fruits. *CAB International* 44 : 289-307.
- Rajapakse, R.G.A.S., Kalubowila, H.V., Kadanamulla, K.G., Sakalasoorya, S.M.I.S.K. 2007. Chemical factors stimulatory to anthracnose development on brinjal (*Solanum melongena* L.) fruits. *Ann. Sri Lanka Dept Agric.* 9 : 119 - 126.
- Richard, D.R., S. Micheletto, dan M. O'Connell. 2010. Gene expression profiles unique to chile (*Capsicum annuum* L.) resistant to *Phytophthora* root rot. *Plant Science* 178 : 192-201.
- Rodrigo, L., Vera, P., dan Conejero, V. 1989. Degradation of tomato pathogenesis-related proteins. *Plant Physiol.* 95 : 616-622.
- Ross, WW dan Sederoff RR. 1992. Phenylalanine ammonia lyase from loblolly pine: purification of the enzyme dan isolation of complementary DNA clone. *Plant Physiol* 98 : 380-386.
- Saxena, Amrita, Richa Raghuvanshi, Vijai Kumar Gupta, dan Harikesh B. Sing. 2016. Chilli anthracnose: the epidemiology and management (Review). *Frontiers in Microbiology*. DOI: 10.3389/fmicb.2016.01527.
- Sharma P, Singh N, Verma OP. 2012. First report of *Colletotrichum gloeosporioides* on *Jasminum grandiflorum* in india. *J Pl Prot Res* 52: 91-92.
- Sheikha SA dan Al-Malki FM. 2011. Growth and chlorophyll responses of bean plants to chitosan applications. *European Journal of Scientific Research* 50 : 124-134.

- Shen, C. R, Chen YS, Yang CJ, Chen JK, dan Liu CL. 2010. Colloid chitin azure is a dispersible, low-cost substrate for chitinase measurements in a sensitive, fast, reproducible assay. *J Biomol Screen* 15:213–217.
- Siddiqui, Y., Meon, S., Ismail, R., Rahmani, M., dan Ali, A. 2008. Bio-efficiency of compost extract on the wet rot incidence, morphological and physiological growth of Okra (*Abelmoschus esculentus* [(L.) Moench]. *Scientia Horticulturae* 117: 9-14.
- Sikirou R, Beed F, Hotègni F, Winter S, Assogba Komlan F, dan Reeder R Miller SA. 2011. First report of anthracnose caused by *Colletotrichum gloeosporioides* on onion (*Allium cepa*) in Benin. *New Dis Rep* 23:7
- Silva ECB, Pelinca MA, Acosta AC, Silva DMF, Gomes FM, dan Guerra MM. 2014. Comparative study of DNA extraction methodologies from goat sperm dan its effects on polymerase chain reaction analysis. *Gene Mole Rese GMR* 13: 6070.
- Soliva, R.C., Elez, P., Sebastián, M, dan Martín, O. 2001. Evaluation of browning effect on avocado purée preserved by combined methods. *Innovative Food Science dan Emerging Technologies* 1: 261-268.
- Sripong Kanlaya, Pongphen Jitareerat, Shinji Tsuyumu, Apiradee Uthairatanakij, Varit Srilaong, Chalermchai Wongs-Aree, Gang Ma, Lancui Zhang, dan Masaya Kato. 2015. Combined treatment with hot water dan UV-C elicits disease resistance against anthracnose dan improves the quality of harvested mangoes. *Crop Protection* 77 : 1-8.
- Stephenson SA, Hatfield J, Rusu AG, Maclean DJ, dan Manners JM. 2000. CgDN3:an essential pathogenicity gene of *Colletotrichum gloeosporioides* necessary to avert a hypersensitive-like response in the host *Stylosanthes guianensis*. *Mol Plant Microbe Interact.* 13: 929–941.
- Sudarshan, N.R, Hoover, D.G., Knorr, D. 1992. Antibacterial action of chitosan. *Food Biotechnol.* 6: 257–272.
- Suwannarat, S., Pattavipha Songkumarn., Siegrid Steinkellner, Siegrid Steinkellner, dan Somsiri Sangchote. 2017. Diversity of *Colletotrichum* spp. isolated from chili pepper fruit exhibiting symptoms of anthracnose in Thailand. *Mycological Progress* DOI : 10.1007/s11557-017-1304-2.
- Suryadi, Y., Tri Puji P., I Made S., D. Susilowati, Tuti Septi S., dan Syaefudin. 2017. Pengendalian penyakit antraknosa *Colletotrichum gloeosporioides* menggunakan kitosan nano hasil hidrolisis kitinase asal *Burkholderia cepacia* isolat E76. *Jurnal AgroBiogen* 13 : 111-122.

- Susanto, FA dan Yekti A.P. 2015. Deteksi dan Kloning Gen Flowering Locus T (FT) Homolog pada Ubi Jalar (*Ipomoea batatas* (L.) Lam.). Thesis. Universitas Gadjah Mada, Yogyakarta.
- Talhinhas P, Sreenivasaprasad S, Neves-Martins JN, dan Oliveira H. 2002. Genetic and morphological characterisation of *Colletotrichum acutatum* causing anthracnose in lupins. *Phytopathology* 92 : 986-996.
- Talhinhas, P., Sreenivasaprasad, S., Neves-Martins, J., dan Oliveira, H. 2005. Molecular and phenotypic analyses reveal association of diverse *Colletotrichum acutatum* groups dan a low level of *C. gloeosporioides* with olive anthracnose. *Microbiology* 71: 2987-2998.
- Taylor, P.W.J. 2007. Anthracnose disease of chilli pepper in Thailand. Proceedings of the International Conference on Integration of Science and Technology for Sustainable Development (ICIST) Biological Diversity, Food dan Agricultural Technology, Bangkok, Thailand. 26-27 April 2007, Pp. 134-138.
- Taylor K, Barran PE, dan Dorin JR. 2008. Structure-activity relationships in beta-*Defensin* peptides. *Biopolymers* : 90:1-7.
- Than, P.P., Jeewon, R., Hyde, K.D., Pongsupasmit, S., Mongkolporn, O., dan Taylor, P.W.J. 2008. Characterization and pathogenicity of *Colletotrichum* species associated with anthracnose disease on chilli (*Capsicum* spp.) in Thailand. *Plant Pathology* 57: 562-572
- Umesha S., H. M. Manukumar, dan Sri Raghava. 2016. A rapid method for isolation of genomic DNA from food-borne fungal pathogens. *3 Biotech* 6 : 123.
- Vasil'ev, L. A., E. V. Dzyubinskaya, R. A. Zinovkin, D. B. Kiselevsky, N. V. Lobysheva, and V. D. Samuilov. 2009. Chitosan-induced programmed cell death in plants. *Biochemistry* 74 : 1270 – 1279.
- Vidhyasekaran, P. 2007. *Handbook of Molecular Technologies in Crop Disease Management*. Haworth Press, Binghamton, New York.
- Vishu, K.A.B., Varadaraj, M.C., Gowda, L.R., dan Tharanathan, R.N. 2005. Characterization of chito-oligosaccharides prepared by chitosan analysis with the aid of papain and Pronase, and their bactericidal action against *Bacillus cereus* and *Escherichia coli*. *Biochem. J.* 391 : 167–175.
- Vriens, K., Cammue, B.P., dan Thevissen, K. 2014. Antifungal plant *Defensins*: mechanisms of action and production. *Molecules* 19 : 12280-12303.

- Waller, J.M., Lenne, J.M., dan Waller, S.J. 2002. Plant pathologists's pocket book. CABI, Wallingford, UK.
- Wang, Y., Puwang Li, Thao Truong-Dinh Tran, Juan Zhang, dan Lingxue Kong. 2016. Manufacturing techniques and surface engineering of polymer based nanoparticles for targeted drug delivery to cancer. *Nanomaterials* 6 : 2-18.
- Weake, V.M. dan Workman J.I. 2008. Histone ubiquitination triggering gene activity. *Mol. Cell.* 29: 653–663.
- White TJ, Bruns T, Lee S, dan Taylor J. 1990. Amplification dan direct sequencing of fungal ribosomal RNA gene of phylogenetic. In : Innis MA, Gelfand DH, Sninsky JJ, White TJ. 1990. : PCR Protocols: a guide to methods dan applications Academic Press, New York, USA. pp : 315-322.
- Wirth, S.J. dan Wolf, G.A. 1990. Dye-labeled substrates for the assay dan detection of chitinase dan lysozyme activity. *J. Microbiol. Meth.* 12 :197-205.
- Wu, L., Liu, M, dan Liang, R. 2008. Preparation and properties of a double-coated slow-release NPK compound fertilizer with superabsorbent and water-retention. *Bioresour. Technol.* 99 : 547–554.
- Xu, Y.M. dan Y.M. Du. 2003. Effect of molecular structure of chitosan on protein delivery properties of chitosan nanoparticles, *International Journal of Pharmaceutics* 250 : 215–226.
- Yao, H.J. dan Tian, S.P., 2005. Effects of a biocontrol agent and methyl jasmonate on postharvest diseases of peach fruit and the possible mechanisms involved. *J. Appl. Microbiol.* 98 : 941-950.
- Zhang, L., Gu, F.X., Chan, J.M., Wang, A.Z., Langer, R.S., dan Farokhzad, O.C. 2008. Nanoparticles in medicine: therapeutic applications dan developments. *Clin. Pharmacol. Ther.* 83 : 761–769.
- Zhao, Wei, Qingqing Chen, Tao Wang, Yuankai Chi. 2016. First report of *Colletotrichum scovillei* causing anthracnose fruit rot on pepper in China. *Plant Disease* DOI: 10.1094/PDIS-04-16-0443-PDN.
- Zheng, X., Ye, L., Jiang, T., Jing, T., Jing, G., dan Li, J., 2012. Limiting the deterioration of mango fruit during storage at room temperature by oxalate treatment. *Food Chem.* 130 : 279- 285.