DAFTAR PUSTAKA

Anonim. 2015. Peraturan Menteri Pertanian Republik Indonesia. <http://perundangan.pertanian.go.id/admin/file/PERMENTAN%2051-2015%20PERUBAHAN%20PERMENTAN%2093-2011%20JENIS%20ORGANISME%20PENGGANGGU%20TUMBUHAN.pdf> diakses tanggal 10 oktober 2018.

Abu-Obeid, I., Khalif, H. and Salem, N. 2017. Detection and identification of bacterial soft rot of potato *Pectobacterium carotovorum* subsp.*carotovorum* using specific PCR primers in Jordan. African Journal of Agricultural Research, Vol. 12(39).

Adikaram, N. 1986. A survey of postharvest losses in some fruits and vegetables and the fungi Associated with them. Ceylon J. Sci. Biol. Sci. 20:1-10.

Agrios, G.N. 2005. Plant Pathology, 5th Edition. Academic Press. New York.

Ausubel, F. M., Brent, R., Kingston, R.E., Moore, D. D., Seidman, J. G., Smith, J. A., and Struhl, K. 2003. Current Protocols in Molecular Biology. John Wiley & Sons, Inc.

Barkai-Golan, R. 2001. Postharvest diseases of fruits and vegetables: Development And Control: Elsevier.

Bettelheim and Landesberg. 2007. Laboratory experiments for general organic and biochemistry. Harcourt College Publishers.

Bhat, K.A., S.D. Masood., N.A. Bhat., M.A. Bhat. and S.M. Razvi. 2010. Current status of post harvest soft rot in vegetables: A Review. Asian Journal of Plant Sciences : 1-9.

CABI. 2018. Datasheet : *Pectobacterium carotovorum* subsp. *carotovorum* (bacterial root rot of sweet potato). < https://www.cabi.org/isc/datasheet/21913> diakses tanggal 28 juni 2018.

Cariddi, C., and Sanzani, S. M. 2013. A severe outbreak of bacterial lettuce soft rot caused by Pectobacterium carotovorum subsp. carotovorum in apulia (Italy). Journal of Plant Pathology. 95: 441-446.

Cariddi, C., and Bubici, G. 2016. First report of bacterial pith soft rot caused by *Pectobacterium carotovorum* subsp. *brasiliensis* on artichoke in Italy. Journal of Plant Pathology. 98: 563-568.

Caruso, G., Gomez, L. D., Ferriello, F., Andolfi, A., Borgonuovo, C., Evidente, A., Simister, R., McQueen-Mason, S. J., Carputo, D., Frusciante, L., and Ercolano, M. R. 2016. Exploring tomato *Solanum pennellii* introgression lines for residual biomass and enzymatic digestibility traits. BMC Genetics. 17: 1–13.

Choi, O. and Kim, J. 2013. *Pectobacterium carotovorum* subsp. *brasiliense* causing soft rot on paprika in Korea. J. Phytopathol. 161:125-127.

Clark, Melody, S. 1997. Plant Molecular Biology : A laboratory manual. Berlin, Heidelberg: Springer-Verlag 529 pp.

Codex Alimentarious Commission (Codex). 2001. Codex standard for kimchi. Codex Standard 223. Rome, Italy: Food and Agriculture Organization of the United Nations.

Czajkowski R., Pérombelon M.C.M., van Veen J.A., van der Wolf J.M. 2012. Control of blackleg and tuber soft rot of potato caused by *Pectobacterium sp.* and *Dickeya species*: a review. Plant Pathology. 60 : 999–1013.

Deak, T., and J. Farkas. 2013. Microbiology of Thermally Preserved Food : Canning and Novel Physical Methods.USA: Destech Publications. Inc.

De Boer, S. H., Li, X., and Ward, L. J. 2012. *Pectobacterium* spp. associated with bacterial stem rot syndrome of potato in Canada. Phytopathology. 102: 937–947.

De Haan, E. G., Dekker-Nooren, T. C. E. M., Van den Bovenkamp, G. W., Speksnijder, A. G. C. L., Van der Zouwen, P. S., and Van der Wolf, J. M. 2008. *Pectobacterium carotovorum* subsp. *carotovorum* can cause potato blackleg in temperate climates. *European Journal of Plant Pathology. 122* : 561–569.

deWerra, P., Bussereau, F., Ziegler, D., and Keiser, A. 2015. First report of potato blackleg caused by *Pectobacterium carotovorum* subsp. *brasiliense* in Switzerland. Plant Disease. 99: 551-551.

Diallo S., Latour X., Groboillot A., *et al.* 2009. Simultaneous and selective detection of two major soft rot pathogens of potato: *Pectobacterium atrosepticum* (*Erwinia*

carotovora subsp. atrosepticum) and *Dickeya spp.* (*Erwinia chrysanthemi*). European Journal of Plant Pathology. 125: 349-355.

Dolphin, W. D. 2008. Biological Investigations. Mcgraw Hill Education. New York.

Duarte, V., De Boer, S. H., Ward, L. J., and de Oliveira, A. M. R. 2004. Characterization of atypical *Erwinia carotovora* strains causing blackleg of potato in Brazil. *Journal of Applied Microbiology. 96 :* 535–545.

Eckert, J.W. 1978. Pathological disease of fresh fruit and vegetables. In Postharvest Biology and Biotechnology. Hultin, H.O. and Miller, N (eds). Food and Nutrition Press, Westport, Connecticut:161- 209.

Erlich, H.A. 1989. Polymerase Chain Reaction. Journal of Clinical Immunology. 9 : 437-447.

Fujimoto, T., Yasuoka, S., Aono, Y., Nakayama, T., Ohki, T., Sayama, M., and Maoka, T. 2017. First report of potato blackleg caused by *Pectobacterium carotovorum* subsp. *brasiliense* in Japan. Plant Disease. 101: 241–241.

Gillis, A., Santana, M. A., Rodriguez, M., and Romay, G. 2017. First report of bell pepper soft rot caused by *Pectobacterium carotovorum* subsp. *brasiliense* in Venezuela. Plant Disease. 101: 1671–1671.

Godfrey, S. A. C., and J. W. Marshall. 2002. Identification of cold-tolerant *Pseudomonas viridiflava* and *P. marginalis* causing severe carrot postharvest bacterial soft rot during refrigerated export from New Zealand. Plant Pathology 51 (2):155-162.

Greisen, K., Loeffeholz, A., Purohit, dan Leong, D. 1993. PCR primers and probes for the 16s rRNA gene of most species of pathogenic bacteria, including bacteria found in cerebrospinal fluid. J. Clin. Microbiol . 32 : 335-351.

Hadas, R., Kritzman, G., Gefen, T., and Manulis, S. 2001. Detection, quantification and characterization of *Erwinia carotovora* ssp. *carotovora* contaminating pepper seeds. Plant Pathology (50) : 117–123.

Handayati, W., Hanudin dan S. Soedjono. 2004. Resistensi genotip anggrek Phalaenopsis terhadap penyakit busuk lunak. J. Hort. 14 (Edisi Khusus) : 398–402.

Hoelzel, A. R. 1992. Molecular Genetic Analysis of Populations. Oxford University Press.

Huang, T. C. 2008. The Occurrence and Control of Fungi and Bacterial Orchid Disease. Taichung Branch Office, Bureau of Animal and Plant Health Inspection and Quarantine.

Joko, T., D. Kiswanti, S. Subandiyah and Hanudin. 2011. *Occurence of Bacterial Soft Rot of Phalaenopsis Orchids in* Yogyakarta and *West Java*, Indonesia, p. 255–265. In Y. Koentjoro (ed.), Proceeding of Internasional Seminar on "Natural Resources, Climate Change, and Food Security in Developing Countries". 27−28 June 2011. Surabaya, Indonesia.

Kang, H., W., Park, D.,S., Go, S.,J., Eun, M.,Y. 2002. Fingerprinting of diverse genomes using PCR with universal rice primers generated from repetitive sequence of Korean weedy rice. Molecules and Cells 13, 281–7.

Kang, H., W., Kwon, S. W., and Go, S. J. 2003. PCR-Based Specific And Sensitive Detection Of *Pectobacterium carotovorum* spp. *carotovorum* By Primers Generated From URP-PCR Fingerprinting Derived Polymorphic Band. Plant Pathology, (52): 127-133.

Karp, Gerald. 2008. Cell and Molecular Biology. John Wiley & Sons.

Keller, G. H. and Mark M. M. 1989. DNA Probes. Houndmills, Basingstoke, Hants: Macmillan.

Kucharek, T. and J. Bartz. 2000. Bacterial Soft Rots of Vegetables and Agronomic Crops. Plant Pathology Fact Sheet.

Laurila J., Hannukkala A., Nykyri J., Pasanen M., Hélias V., Garlant L., Pirhonen M. 2010. Symptoms and yield reduction caused by *Dickeya spp*. strains isolated from potato and river water in Finland. European Journal of Plant Pathology. 126 : 249–262.

Lee, D.H., Kim, J-Beom, Lim, J-A., Han, S.W., Heu, S. 2014. Genetic Diversity of *Pectobacterium carotovorum* subsp. *brasiliensis* Isolated in Korea. Plant Pathol J. 30(2): 117–124.

Lee MD, Fairchild A. 2006. Sample Preparation for PCR. In: Maurer, J (ed.). Food Microbiology and Food Safety: PCR Methods in Foods. USA: Springer.

Ma, B., Hibbing, M. E., Kim, H., Reedy, R. M., Yedidia, I., Breuer, J. 2007. Host range and molecular phylogenies of the soft rot enterobacterial genera Pectobacterium and Dickeya. Phytopathology. 97: 1150‑1163.

Marchesi, J.R., Sato, T., Weightman , A.J., Martin, T.A., Fry, J.C., Hiom, S.J., Wade, W.G. 1998. Design and evaluation of useful bacterium specific PCR primer that amplify genes coding for bacterial 16S- rRNA. Appl. Environ. Microbiol. 64 : 795-799.

Markoulatos P, Siafakas N, Moncany M. 2002. Multiplex Polymerase Chain Reaction : A Practical approach. J. Clin Lab. Anal. 16(1): 47-51.

Marrero, G., Schneider, K.L., Jenkins, D.M., Alvarez, A.M. 2013. Phylogeny and classification of *Dickeya* based on multilocus sequence analysis. Int.J. Syst. Evol. Microbiol. 63: 3524-3539.

McCarter-Zorner, N. J., Franc, G. D., Harrison, M. D., Michaud, J. E., Quinn, C. E., Ann Sells, I. 1984. Soft rot Erwinia bacteria in surface and underground waters in southern Scotland and in Colorado, United States. Journal of Applied Microbiology (57): 95–105.

McNally, R. R., Curland, R. D.,Webster, B. T., Robinson, A. P., and Ishimaru, C. A. 2017. First report of *Pectobacterium carotovorum* subsp. *brasiliensis* causing blackleg and stem rot in commercial and seed potato fields in Minnesota and North Dakota. Plant Disease. 101: 1672–1672.

Meng, X. N., Chen, Q. M., Fan, H.Y., Song, T. F., Cui, N., Zhao, J.Y., Jia, S. M., and Meng, K. X. 2017. Molecular characterization, expression analysis and heterologous expression of two translationally controlled tumor protein genes from *Cucumis sativus*. PLoS One. 12: 1-17.

Mirhendi, H., Diba, K., Rezaei, A., Jalalizand, N., Hosseinpur, L., Khodadadi, H., 2007. Colony PCR is a rapid and sensitive method for DNA amplification in yeasts. Iran. J. Public Heal. 36.

Moraes, A. J. G., Souza, E. B., Mariano, R. L. R., Silva, A. M. F., and Lima, N. B. 2017. First report of *Pectobacterium aroidearum* and *Pectobacterium carotovorum* subsp. *brasiliensis* causing soft rot of Cucurbita pepo in Brazil. Plant Disease. 101: 379-380.

Muharam A, Indrasti R dan Hanudin. 2012. Occurrence of *Dickeya dadantii* the causal agent of bacterial soft rot on orchids in DKI Jakarta and West Java Indonesia. Crop Environ. 3(1-2) : 37–44.

Nabhan, A. S., De Boer, H. S., Maiss, E., and Wydra, K. 2012. Taxonomic relatedness among *Pectobacterium carotovorum* subsp. *carotovorum*, *Pectobacterium carotovorum* subsp. *odoriferum* and *Pectobacterium carotovorum* subsp. *brasiliense*. Journal of Applied Microbiology. 113: 904-913.

Nassar A., Darrasse A., Lemattre M., *et al*. 1996. Characterization of *Erwinia chrysanthemi* by pectinolytic isozyme polymorphism and restriction fragment length polymorphism analysis of PCR-amplified fragments of pel genes. Applied and Environmental Microbiology. 62 :2228- 2240.

Onkendi, E. M., and Moleleki, L. N. 2014. Characterization of *Pectobacterium carotovorum* subsp. *carotovorum* and *brasiliense* from diseased potatoes in Kenya. European Journal of Plant Pathology. 139: 557-566.

Ozturk, M., and Aksoy, H. M. 2016. First report of *Pectobacterium carotovorum* subsp. *brasiliensis* causing blackleg and soft rot of potato in Turkey. Journal of Plant Pathology. 98: 677-697.

Panda, P., Fiers, M. A. W. J., Armstrong, K., and Pitman, A. R. 2012. First report of blackleg and soft rot of potato caused by *Pectobacterium carotovorum* subsp. *brasiliensis* in New Zealand. New Disease Reports. 26: 15-15.

Pelczar, Michael, J., Chan, E.C.S. 2012. Dasar-Dasar Mikrobiologi 2. Jakarta: UI Press.

Pothier, J.F., Pagani, M.C., Pelludat, C.,Ritchie, D.F., Duffy, B. 2011. A duplex-PCR method for species and pathovar level identification and detection of the quarantine plant pathogen *Xanthomonas arboricola pv. pruni*. Journal Of Microbiological Methods. 86: 16-24.

Putu, I. D. 2013. Budidaya Wortel (*Daucus carrota*). Badan Perencanaan Pembangunan Daerah (Bappeda). Seumedang.

Rychlik, W., Spencer, W.J., dan Rhoads. R.E. 1990. Optimization of the annealing temperature for DNA amplification in vitro. Nucleic Acids Res. 18: 6409-6412.

Sambrook, J., and Russell, D.W. 1989. Molecular Cloning: A Laboratory Manual 3rd edition. Laboratory Pr. New York.

Samson, R., Legendre, J.B, Christen R, Fischer-Le Saux M, Achouak W, Gardan L. 2005. Transfer of *Pectobacterium chrysanthemi* (Burkholder et al., 1953) Brenner I. 1973 and Brenneria paradisiaca to the genus *Dickeya* gen. nov. as *Dickeya chrysanthemi* comb. nov and *Dickeya paradisiaca* comb. nov. and delineation

of four novel species, *Dickeya dadantii sp*. nov., *Dickeya dianthicola sp*. nov., *Dickeya dieffenbachiae sp*. nov. and *Dickeya zeae sp*. nov. International Journal of Systematic and Evolutionary Microbiology 55: 141-527.

Sastrapradja, S., Irawati dan R.E. Nasution. 1977. Evaluasi dan Pemanfaatan Anggrek-Anggrek Alam Indonesia. Buletin Kebun Raya. 3(1) : 17-20.

Secor, G. A., Rivera-Varas, V. V., Brueggeman, R. S., Metzger, M.S., Rengifo, J., and Richards, J. K. 2016. First report of field decay of sugar beet caused by *Pectobacterium carotovorum* subsp. *brasiliense* in North America. Plant Disease. 100: 2160–2160.

Sint D., R. Lorna and T. Michael. 2012. Advances In Multiplex PCR : Balancing Primer Efficiencies And Improving Detection Success. Methods In Ecology And Evolution. 3: 898-905.

Sjobring JH, Mecklenburg M, Andersen AB, Miorner H. 1990. Polymerase chain reaction for detection of *Mycobacterium tuberculosis*. J Clin Microbiol. 28:2200-04.

Snijder, R.C., and J.M.V. Tuyl. 2002. Evaluation of test to determine resistance of *Zantedeschia* spp. (Araceae) to soft rot caused by *Erwinia carotovora* subsp. *carotovora*. European Journal of Plant Pathology (108) : 565-571.

Sugiyono. 2016. Metode Penelitian Kuantitatif, Kualitatif dan R&D. Bandung: PT Alfabet.

Sunarno, Muna, F., Fitri, N., Malik, A., Karuniawati, A., Soebandrio, A. 2014. Metode cepat ekstraksi DNA *Corynebacterium diphtheriae* untuk pemeriksaan PCR. Bul. Penelit. Kesehat. 42(2): 85-92.

Supriadi, Ibrahim N, dan Taryono. 2002. Karakterisasi *Erwinia chrysanthemi* penyebab penyakit busuk bakteri pada daun lidah buaya (*Aloe vera*). J Litri. 8 (2):45–48.

Supriyanto, Priyatmojo A, dan Arwiyanto T. 2011. Uji penggabungan PGPF dan *Pseudomonas putida* strain Pf-20 dalam pengendalian hayati penyakit busuk lunak lidah buaya di tanah gambut. J. HPT Trop. 11:11–21.

Surzycki, S. 2000. Basic Techniques In Molecular Biology. Springer-Verlag Berlin Heidelberg.

Switzer. 1999. Experimental biochemistry. W. H. Freeman.

Takahashi, M. 2016. Medicine and Biopharmaceutical: Proceedings of the 2015 international conference. In X. Z. Gao, (Ed.). Isolation of bacteria inhibiting

Erwinia Carotovora and study of bacteria antibacterial characteristics. World Scientific Publishing Company Pte Limited.

Teddie, C., and A. Tashakkori. 2009. Foundations of Mixed Methods Research: Integrating Quantitative and Qualitative Approaches in the Social and Behavioral Sciences.

Thomas J.E., W.C. Wong and D.H. Goanlock. 1989. Modern methods for the detection of plant pathogens. Queensland Agric. J. Jan-Feb 1989. p. 49-53.

Tom, L., Nyree, D. Phillips, and David J. Hampson. 2003. Development of a duplex PCR assay for detection of *Brachyspira hyodysenteriae* and *Brachyspira pilosicoli* in pig feces. Journal of Clinical Microbiologi.

Toth I. K., Avrova A.O., and Hyman, L.J. 2001. Rapid identification and differentiation of the soft rot erwinias using 16S-23S intergenic transcribed spacer-PCR and RFLP analyses. Applied and Environmental Microbiology. 67: 40-76.

Toth I. K., van der Wolf J. M., Saddler G., Lojkowska E., Hélias V., Pirhonen M., Tsror L., Elphinstone J.G. 2011. *Dickeya species*: an emerging problem for potato production in Europe. Plant Pathology. 60 : 385–399.

Tsror L, Erlich O, Lebiush S. 2009. Assessment of recent outbreaks of *Dickeya sp.* (syn. *Erwinia chrysanthemi*) slow wilt in potato crops in Israel. European Journal of Plant Pathology. 123: 311-20.

Van der Merwe, J. J., Coutinho, T. A., Korsten, L., and Van der Waals, E. 2010. *Pectobacterium carotovorum* subsp. *brasiliensis* causing blackleg on potatoes in South Africa. *European Journal of Plant Pathology*. 126: 175–185.

Verkuil, E. V. P., Alex van B., and John P. H. 2008. Principles and technical aspects of PCR amplification. Springer Netherlands.

Wang, L., Li, H., Zhao, C., Li, S., Kong, L., Wu, W., Kong, W., Liu, Y., Wei, Y., Zhu, J. K., and Zhang, H. 2017. The inhibition of protein translation mediated by AtGCN1 is essential for cold tolerance in *Arabidopsis thaliana*. Plant Cell & Environment. 40: 56–68.

Waldee EL, 1945. Comparative studies of some peritrichous phytopathogenic bacteria. Iowa State Journal of Science. 19 : 84-435.

Waleron, M.,Waleron, K., and Lojkowska, E. 2015. First report of *Pectobacterium carotovorum* subsp. *brasiliense* causing soft rot on potato and other vegetables in Poland. Plant Disease. 99: 1271-1271.

Walker, J. M. and Ralph R. 2008. Molecular Biomethods Handbook. Humana Press.

Yamamoto, S. Kasai, H., Arnold, D.L., Jackson, R.W., Vivian, A., Harayama, S. 2000. Phylogeny of the genus *Pseudomonas*: intrageneric structure reconstructed from the nucleotide sequences of *gyrB* and *rpoD* genes. Microbiology 146:2385-2394.

Yudharta. 2010. Pertumbuhan Tanaman Sawi . UGM. Yokyakarta.

Yusnita. 2010. Perbanyakan In Vitro Tanaman Anggrek. Lembaga Penelitian Universitas Lampung. Bandar Lampung.

Yusnita. 2012. Pemuliaan Tanaman Anggrek untuk Menghasilkan Anggrek Hibrida Unggul. Lembaga Penelitian Universitas Lampung. Bandar Lampung. 179 p.

Zuzak, K., Zahr, K., Yalong, Y., Sarkes, A., Feindel, D., Daniels, G., Harding, M.W., and Feng, J. 2018. A duplex PCR method or identification of cultures of *Fusarium graminearum* from infected wheat grain without DNA extraction. Can. J. Plant Pathology.