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DAFTAR PUSTAKA

Abels, F.B., P.W.Morgan. M.E.Saltveit. 1992. Ethylene in Plant Biology. Academic Press, New York.

Amaria, W., E.Taufiq. R.Harni. 2013. Seleksi dan identifikasi jamur antagonis sebagai agem hayati jamur akar putih (Rigidoporus microporus) pada tanaman karet. Buletin RISTRI. 4 : 55-64

Amir, S., S.Sutar. S.K.Singh. A.Baghela. 2015. A rapid and efficient method of fungal genomic DNA extraction, suitable for PCR based molecular methods. Plant Pathology and Quarantine 5: 74–81

Anonim. 2014. Pembagian Zona Kabupaten Gunungkidul**.** <http://bpbdgunungkidul.blogspot.co.id> Diakses pada 12 Desember 2017

Anonim. 2010. Updating Database Tanah dan Iklim Kabupaten Kulon Progo. <.http://yogya.litbang.pertanian.go.id/ > Diakses pada 12 Desember 2017

Anonim. 2013. Proyeksi Penduduk Indonesia 2010-2035. Badan Pusat Statistik, Jakarta

Arhadi, K. F., R.M.Aleki. 2001. A new spectrophotometric method for the determination of ketoconazole based on the oxidation reactions. Analytical Sciences. 17 : 867-870

Ashraf, M., M.R.Foolad. 2007. Improving plant abiotic-stress resistance by exogenous application of osmoprotectants glycine betaine and proline. Environmental Experimental Botany. 59: 206–216.

Barnito, N. 2009. Budidaya Tanaman Jagung. Suka Abadi, Yogyakarta.

Belimov, A.A., V.I.Safronova, T.A.Sergeyeva, T.N.Egorova, V.A.Matveyeva, V.E. Tsyganov, A.Y.Borisov, I.A.Tikhonovich, C.Kluge, A.Preisfeld, K.J.Dietz, V.V. Stepanok. 2001. Characterization of plant growth promoting rhizobacteria isolated from polluted soils and containing 1-aminocyclopropane-1-carboxylate deaminase. Canada Journal Microbiogy. 47: 642–652.

Beuer, J.T., N.M.Kleczewski. J.D.Bever. K.Clay. H.L.Reynolds. 2012. Nitrogen-fixing bacteria, arbuscular mycorrhizal fungi, and the productivity and structure of prairie grassland communities. Oecologia. 170 : 1089–1098

Buchan, R., Newell. 2002. Analysis of Internal Transribed Spacer (ITS) Regionof rRNA Genes in Fungal Communities in Southeastern U.S. Salt Marsh. Microbial Ecology .43: 329-340.

Cokkizgin, A. 2012. Salinity stress in common bean (Phaseolus vulgaris L.) seed germination. Notulae Botanicae Horti Agrobotanici 40 :177-182.

UNIVERSITAS GADJAH MADA
ISOLASI DAN IDENTIFIKASI JAMUR PENGHASIL ACC DEAMINASE DARI RHIZOSFER DAN AKAR TANAMAN YANG TUMBUH SEHAT DI LAHAN SALIN
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Universitas Gadjah Mada, 2018 | Diunduh dari http://etd.repository.ugm.ac.id/

Charles, B.Y., B.Lipman. 1911. Nitrogen fixation by yeast and other fungal. The Journal of Biological Chemistry. 10 : 169-182.

Chen, W., N.Krage, L.Wu, G.Pan, M.Khosrivafard, A.C.Chang.2008. Arsenic, cadmium, and lead in california cropland soils: role of phosphate and micronutient fertilizer. Journal Environment Quality. 37: 689-695.

de Castro, R.D., G.L.Ferreira. Silva, T.M.P.A.de Souza. E.M.M.B.Costa. L. M. D.Bezerra. L.C.Alessandro. 2015. Antifungal activity and mode of action ofthymol and its synergism with nystatinagainst Candida species involved withinfections in the oral cavity: an in vitrostudy. BMC Complementary and Alternative Medicine . 15: 1-7

El-Maghraby, O. M., O.Soltan. S.M.Rehab. M.Mohammed. Maha. M.Mohammed. 2013. Endophytic fungi of three leguminous plant roots in Egypt. Journal of Basic and Applied Mycology 4 : 59-68

Francisco X. N., J.R.Marcio. R.F.S.S.Claudio. J.Brendan. McConkey. B.R.Glick. 2014. New Insights into 1-Aminocyclopropane-1-Carboxylate (ACC) Deaminase Phylogeny, Evolution and Ecological Significance. Plose one. 9: 1-17

Gama, P. B. S., S.Inagana. K.Tanaka. R.Nakazawa. 2007. Physiological response of common bean (Phaseolus vulgaris L.) seedlings to salinity stress. African Journal of Biotechnology. 2:79-88.

Gamalero, E., G.Berta. B.R.Glick. 2009. The use of microorganisms to facilitate the growth of plants in saline soils. In MS Khan, A Zaidi, J Musarrat, eds, Microbial Strategies for Crop Improvement. SpringerVerlag, Berlin.

Gamalero, E., B.R.Glick. 2015. Bacterial Modulation of Plant Ethylene Levels. American Society of Plant Biologists. 169 : 13-22

Gandjar, I. 2006. Pengenalan Kapang Tropik Umum. Yayasan Obor Indonesia, Jakarta.

Ghoulam, C., A.Foursy. K.Fares. 2002. Effect of salt stress on growth, inorganic ions and proline accumulation in relation to osmotic adjustment in five sugar beet cultivars. Environmental and Experimental Botany. 47 :39-50.

Ghorbanli, M. H.Ebrahimzadeh. M.Sharifi. 2004. Effect of NaCl and mycorrhizal fungi on antioxidative enzymes in soybean. Biologia Plantarum. 48 : 575-581

Glick B.R, Z.Cheng. J.Czarny. J.Duan. 2007. Promotion of plant growth by ACC deaminase-producing soil bacteria. European Journal of Plant Pathology. 119: 329–339.

Glick, B.R. 2014. Bacteria with ACC deaminase can promote plant growth and help to feed the world. Microbiological Research. 169:30–39.

UNIVERSITAS GADJAH MADA
ISOLASI DAN IDENTIFIKASI JAMUR PENGHASIL ACC DEAMINASE DARI RHIZOSFER DAN AKAR TANAMAN YANG TUMBUH SEHAT DI LAHAN SALIN
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Gomes E .A. 2002. Polymorphism in The *Internal Transcribed Spacer* (ITS) of The Ribosomal DNA of 26 Isolates of Ectomycorrhizal Fungi. Genetics and Molecular Biology 25 : 477-483.

Golzar, H. 2009. First report of Pyrenochaeta lycopersici, causal agentof tomato corky root rot in Australia. Australasian Plant Disease Notes. 4 : 126–128

Gulbis, K., B.Bankina. G.Bimšteina. I.Neusa-Luca. A.Roga. D..Fridmanis. 2016. Fungal diversity of maize (*Zea mays* l.) Grains. Rural Sustainability Research 35 : 1-6

Gupta, V.K., M.G.Tuohy. M.Ayyachamy. K.M.Turner. A.O'Donovan. 2012. Laboratory Protocols In Fungi Biology. Springer Scinence & Business Media, New York.

Goryluk, A., H.Rekosz-Burlaga, M.Blaszczyk. 2009. Isolation and characterization of bacterial endophytes of *Chelidonium majus* L. Polish Journal of Microbiology 58: 355-361.

Honma, M., Shimomura, T. 1978. Metabolism of 1-aminocyclopropane-1-carboxylic acid. Agricultural and Biological Chemistry. 42: 1825–1831

Jia, Y.J., Y. Kakuta, M. Sugawara, T. Igarashi, N. Oki, M, Kisaki, T. Shoji, Y. Kanetuna, T. Horita, H. Matsui, M. Honma. 2000. Synthesis and Degradation of 1Aminocyclopropane-1-carboxylic Acid by Penicillium citrinum. Bioscience, Biotechnology, and Biochemistry. 63: 542-549

Jones, J.B. 2002. Agronomic Handbook Management of Crops, Soil, and Their Fertility. CRC Press. New York. 450 pp.

Kandil, A.A., A.E.Sharief. Kh.R.Ahmed. 2015. Performance of some soybean (Glycine max (L.) Merril l) cultivars under salinity stress to germination characters. International Journal Agronomy and Agricultural Research 6 :48-56.

Kannangara, S., R.M.G.C.S.Dharmarathna D.L.Jayarathna. 2017. Isolation, Identification and Characterization of *Trichoderma* Species as a Potential Biocontrol Agent against *Ceratocystis paradoxa.* The Journal of Agricultural Sciences 12 : 51-62

Li, J., D.H.Ovakim. T.C.Charles. B.R.Glick. 2000. An ACC deaminase minus mutant of Enterobacter cloacae UW4 no longer promotes root elongation. Current Microbiology. 41: 101–105.

Linderman, R.G. 2008. The mycorrhizosphere phenomenon. Deutsche Phytomedizinische Gesellschaft,Braunschweig, Germany.

Manter, D.K., J.M. Vivanco. 2007. Use of the ITS primers, ITS1F and ITS4, to characterize fungal abundance and diversity in mixed-template samples by qPCR and length heterogeneity analysis. Journal of Microbiological Methods. 71 : 7–14

UNIVERSITAS GADJAH MADA
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Martin, K.J., P. T. Rygiewicz. 2005. Fungal-specific PCR primers developed for analysis of the ITS region of environmental DNA extracts. BMC Microbiology. 5 : 1-11

Min, Y.J., M.S.Park. J.J.Fong. Y.Quan. S.Jung. Y.W.Lim. 2014. Diversity and saline resistance of endophytic fungi associated with pinus thunbergii in coastal shelterbelts of Korea. Journal of Microbiology and Biotechnology. 24 : 324–333

Nascimento, F. X. C. Brígido, B. R. Glick, and M. J. Rossi. 2016. The Role of Rhizobial ACC Deaminase in the Nodulation Process of Leguminous Plants. Internation Journal of Agronomy.1–9

Okungbowa, F.I., A.K. Ghosh. R. Chowdhury. P. Chaudhuri. A. Basu. K. Pal. 2007. Mechanical Lysis of Candida Cells for Crude Protein and Enzymatic Activity Estimation: Comparison of Three Methods. World Journal of Medical Sciences. 2 : 101-104

Prahasta, A., 2009. Budidaya, Usaha, Pengolahan Agribisnis Jagung. Pustaka Grafika. Bandung.

Purwono, H. Purnamawati. 2007. Budidaya 8 Jenis Tanaman Pangan Unggul. Penebar Swadaya, Bogor.

Putri, P.H., G.W.A.Susanto. A.Taufiq. 2017. Soybean Genotype Tolerance to Salinity Stress. Penelitian Pertanian Tanaman Pangan. 1: 233-242

Raihan, A., M.A.Rahman. A.S.M.Nahiyan. 2016. Genomic DNA Extraction MethodFrom *Trichoderma* Spp. Colonies Without The Use Of Phenol. Imperial Journal of Interdisciplinary Research. 2 :1- 4

Roesmarkam, A., N.W.Yuwono. 2002. Ilmu Kesuburan Tanah. Penerbit Kanisius. Yogyakarta.

Samuels, G. J., L.Elke. I.N.Helgard. 1998. *Trichoderma asperellum*, a new species with warted conidia, and redescription of T. viride. Sydowia. 51: 71-88.

Sekhar, Y. C., S.K.Ahammed. T.N.V.K.V.Prasad. R.S.J.Devi. 2017. Identification of *Trichoderma* species based onMorphological characters isolated from rhizosphere of groundnut (*Arachis hypogaea* l). International Journal of Science, Environment. 6 : 2056 –2063

Singh, R.P., G.M.Shelke. A.Kumar. P.N.Jha. 2015. Biochemistry and genetics of ACC deaminase: a weapon to “stress ethylene” produced in plants. Frontiers in Microbiology. 6 : 1-14

Schuster, A., M.Schmoll. 2010. Biology and biotechnology of *Trichoderma*. Applied Microbiology and Biotechnology. 87 :787-799.

UNIVERSITAS GADJAH MADA
ISOLASI DAN IDENTIFIKASI JAMUR PENGHASIL ACC DEAMINASE DARI RHIZOSFER DAN AKAR TANAMAN YANG TUMBUH SEHAT DI LAHAN SALIN
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Universitas Gadjah Mada, 2018 | Diunduh dari http://etd.repository.ugm.ac.id/

Sholihah, N.F., T.B.Saputro. 2016. Respon tanaman jagung (*zea mays* l.) Verietas Manding terhadap cekaman salinitas (NaCl) Secara *in vitro.* Jurnal Sains Dan Seni Its. 5: 2337-3520

Solaiman, M.Z. Hirata. 1995. Effect of indigenous Arbuscular Mycorrhizal Fungi in Paddy Fields on Rice Growth and NPK nutrition Under Different water regimes. Soil Science and Plant Nutrition . 41 : 505-514

Taufiq, A., A. Kristiono. D.Harnowo. 2015. Respon varietas unggul kacang tanah terhadap cekaman salinitas. Jurnal Penelitian Pertanian Tanaman Pangan 34:153-164.

Ülhan, S., R. Demürel. A.Asan. Cengiz C.Bayu. E. Kinaci. 2006. Colonial and Morphological Characteristics of SomeMicrofungal Species Isolated from Agricultural Soils in Eskißehir Province (Turkey). Turkish Journal of Botany. 30 : 95-104

Viterbo, A., L.Udi. K.Sofia. C.Leonid. C.Ilan. 2010. Characterization of ACCdeaminase fromthe biocontrol and plant growth-promoting agent Trichoderma asperellum T203. FEMS Microbioloy Letters. 305 : 42–48

Vistapharm, 2017. Nystatin Oral Suspension. [www.drugs.com/pro/nystatin-oral-suspension.html] diakses pada 8 Maret 2018, pukul 11.30 WIB

Waitling, K. 2007. Measuring Salinity . Natural Resource and Water. Queensland Government

Weiler, C.B., P.K.Francielli. H.N.Graziela. S.L.Érico. Selene, D.A.Coutinho. H.A.Sydney. 2013. Susceptibility variation of Malassezia pachydermatis to antifungal agents according to isolate source. Brazilian Journal of Microbiology. 44 : 174-178

White, T. J., T.Bruns. Lee. J.Taylor. 1990. Amplification and direct sequencing of fungal ribosomal RNA genes for phylogenetic. 38 : 315-322.

Wang,C., E.Knill, B.R.Glick, D.Defago. 2000. Effect of transferring 1-aminocyclopropane-1-carboxylic acid (ACC) deaminase gene into *Pseudomonas fluorescens* strain CHA0 and its gacA derivative CHA96 on their growth-promoting and disease-suppressive capacities. Canadian Journal of Microbiology. 46: 898-907

Yadav, S., M.Irfan, A.Ahmad, S.Hayat. 2011. Causes of salinity and plant manifestations to salt stress. A review Journal of Environmental Biology. 32:667-685.

Zhang, F., J.Zhang . L.Chen. X.Shi. Z.Lui. C.Li. 2015. Heterologous expression of ACC deaminase from Trichoderma asperellum improves the growth performance of Arabidopsis thaliana under normal and salt stress conditions. Plant Physiology and Biochemistry . 94:41-7.