



DAFTAR PUSTAKA

Abrol, I. P. 1988. Salt Affected Soils: Problems and Prospect in Developing Countries. Tycooly International Riverton, New Jersey pp 67

Acosta-Motos, J.R., M.F.Ortuño, A. Bernal-Vicente, P. Diaz-Vivancos, M.J. Sanchez-Blanco, and J.A.Hernandez, 2017. Plant Responses to Salt Stress: Adaptive Mechanisms. Agronomy 7: 18

Adhikari, B.B., B.Mehera, dan S. Haefele. 2013. Impact of rice nursery nutrient management, seeding density and seedling age on yield and yield attributes. American Journal of Plant Sciences 4: 146-155

Akram, M., M. Hussain, S. Akhtar dan E. Rasul. 2001. Impact of NaCl salinity on yield components of some wheat accessions/varieties. International Journal of Agriculture and Biology 4: 156-158

Ali, Y., Z. Aslam, A.R. Awan, F. Hussain, and A.A. Cheema.2004. Screening rice (*Oryza sativa L.*) lines/cultivars against salinity in relation to morphological and physiological traits and yield components. International Journal of Agriculture and Biology 3:572–575

Anonim. 2008. Deskripsi Varietas Tanaman Padi. Balai Besar Penelitian Tanaman Padi. Departemen Pertanian pp. 1

Aref, F. 2013. Effect of saline irrigation water on yield and yield components of rice (*Oryza sativa L.*). African Journal of Biotechnology 12: 3503-3513

Arnon, D.I. 1949. Copper enzymes in isolated chloroplasts, polyphenoxidase in *Beta vulgaris*. Plant physiology 24: 1-15

Asada K, dan M. Takahashi.1987. Production and scavenging of active oxygen in chloroplasts. In DJ Kyle, CB Osmond, CJ Arntzen, eds, Photoinhibition. Elsevier, Amsterdam, pp 227–287

Ashraf, M. and M. Foolad. 2007. Roles of glycine betaine and proline in improving plant abiotic stress resistance. Environmental and Experimental Botany 59:206-216

Bakht, J.,M. Shafi, Y. Jamal, dan H. Sher. 2011. Response of maize (*Zea mays L.*) to seed priming with NaCl and salinity stress. Spanish Journal of Agriculture Resource 9: 252-61

Baki, G.K.A., F. Siefritz, H.M. Man, H. Weiner, R. Kaldenhoff, and W.M. Kaiser. 2000. Nitrate reductase in *Zea mays L.* under salinity. Plant, Cell, and Environment 23: 515-521

Balai Penelitian Tanah. 2005. Petunjuk TeknisAnalisis Kimia Tanah, Tanaman,Air, dan Pupuk. Badan Penelitian dan Pengembangan Pertanian, Departemen Pertanian pp 34-38

Balai Pengkajian Teknologi Pertanian. 2009. Budidaya Tanaman Padi. Badan Ketahanan Pangan dan Penyuluhan Pertanian, Aceh pp 43-52

Basu, S., V. Ramegowda, A. Kumar, dan A. Pereira. 2016. Plant adaptation to drought stress. F1000Research 1:1-10

Bates, L.S., R.P. Wakilren, dan I.D. Tedre. 1973. Rapid determination of free proline water stress studies. Plant Soil. 39: 205-207



**PENGARUH PERSEMAIAN SALIN BASAH DAN KERING TERHADAP PERTUMBUHAN DAN HASIL
PADI (*Oryza sativa L.*)
TERCEKAM SALINITAS**

DEVI ALVIOLIANA, Ir. Budiastuti Kurniasih, M.Sc., Ph.D; Rani Agustina Wulandari, S.P., M.P., Ph.D.; Prof. Dr. Ir. Didi
Universitas Gadjah Mada, 2020 | Diunduh dari <http://etd.repository.ugm.ac.id/>

Binzel M.L., P.M.Hasgawa, A.K.Handa, dan R.A.Bressan, 1985. Adaptation of tobacco cells to NaCl. *Plant Physiology* 79: 118-125

Binzel M.L., F.D. Hess, R.A. Bressan, dan P.M. Hasegawa. 1988. Intracellular compartmentation of ions in salt-adapted tobacco cells. *Plant Physiology* 86: 607-14

Blumwald E. 1987. Tonoplast vesicles as a tool in the study of ion transport at the plant vacuole. *Physiology Plantarum* 69: 731–734

Bohnert, H.J., D.E. Nelson, dan R.G. Jensen. 1995. Adaptations to environmental stresses. *Plant Cell* 7: 1099-1111

Boriboonkaset, T., Theerawitaya, C., Pichakum, A., Cha-um, S., Takabe, T. and Kirdmanee, C. 2012. Expression levels of some starch metabolism related genes in flag leaf of two contrasting rice genotypes exposed to salt stress. *Australian Journal of Crop Science* 6:1579-1586

Boscaiu, M., P. Donat, and O. Vicente. 2012. Stress-tolerant wild plants: a source of knowledge and biotechnological tools for the genetic improvement of stress tolerance in crop plants. *Notulae Botanicae Horti Agrobotanici Cluj-Napoca* 40:323-327

Brady, N.C. dan R.W. Ray. 2000. Elements of The Nature and Properties of Soils. Prentice Hall, New Jersey pp 97-108

Cano E.A., M.C.Bolarin, F.Perez-Alfocea, dan M. Caro. 2001. Effect of NaCl priming on increased salt tolerance in tomato. *Journal Horticultural Science* 66:621- 628

Chandramohanan K.T., V.V.Radhakrishnan, E.A.Joseph, and K.V.Mohanan. 2014. A Study on effect of salinity stress on chlorophyll content of certain rice cultivars of Kerala state of India. *Agriculture, Forestry and Fisheries* 2: 67- 70

Chen, K. dan R. Arora. 2013. Priming memory invokes seed stress-tolerance. *Environmental and Experimental Botany* 94 : 33-45.

Chen, Q., M. Zhang, dan S. Shen. 2011. Effect of salt on malondialdehyde and antioxidant enzymes in seedling roots of Jerusalem artichoke (*Helianthus tuberosus L.*). *Acta Physiologia Plantarum* 33 : 273 - 278

Chong, Y.J. A. Khan, P. Scheelbeek, A. Butler, D. Bowers, dan P. Vineis. 2014. Climate change and salinity in drinking water as a global problem: using remote-sensing methods to monitor surface water salinity. *International Journal of Remote Sensing* 4 : 1585-1599

Cotsaftis, O., D. Plett, N. Shirley, M. Tester, dan M. Hrmova. 2012. A two-staged model of Na⁺ exclusion in rice explained by 3D modeling of HKT transporters and alternative splicing. *PLoS ONE* 7 : 39-46

Damanik, M., M.B Bachtiar, E.H Fauzi, Sarifuddin, dan H. Hanum. 2011. *Kesuburan Tanah dan Pemupukan*. USU Press. Medan pp 44-47

Deptan. 2009. Deskripsi Varietas Tanaman Padi. Balai Besar Penelitian Tanaman Padi. Departemen Pertanian pp 1



**PENGARUH PERSEMAIAN SALIN BASAH DAN KERING TERHADAP PERTUMBUHAN DAN HASIL
PADI (*Oryza sativa L.*)
TERCEKAM SALINITAS**

DEVI ALVIOLIANA, Ir. Budiaستuti Kurniasih, M.Sc., Ph.D; Rani Agustina Wulandari, S.P., M.P., Ph.D.; Prof. Dr. Ir. Did

Universitas Gadjah Mada, 2020 | Diunduh dari <http://etd.repository.ugm.ac.id/>

Dionisio-Sese, M.L., dan S. Tobita. 1998. Antioxidant responses of rice seedlings to salinity stress. *Plant Science* 135: 1–9

Djaenudin, D., Marwan, Subagjo, dan A. Hidayat. 2011. Petunjuk Teknis Evaluasi Lahan untuk Komoditas Pertanian. Balai Penelitian Tanah, Puslitbangtanak, Bogor pp 27-30

Edward, C. 2013. Faktor-faktor yang mempengaruhi volume impor beras di Indonesia. *Jurnal JIBEKA*. Universitas Ma Chun, Malang pp 5-8

FAO. 2008. Land and Plant Nutrition Management Service. Diakses dari laman :<http://www.fao.org/ag/b/agl/agll/spush/> pada 15 April 2018

Farooq, M., S. M. A. Basra., K. Hafeez dan N. Ahmad. 2005. Thermal hardening: a new seed vigor enhancement tool in rice. *Acta Botany* 47:187–193

Firmansyah, R., B. Kurniasih, dan D. Indradewa. 2017. Shoot growth and yield of rice (*Oryza sativa* var. *Indica*) in the combined submergence and salinity. *International Journal of Science and Research* 5 : 1880 - 1884

Flowers, T.J. dan A.R.Yeo. 1992. Solute Transport in Plants. Blackie Academic and Professional, Glasgow pp 78-83

Flowers T. J., Colmer T. D. 2015. Plant salt tolerance: adaptations in halophytes. *Annual Botany* 115: 327–331

Fraga, T.I., F.C. Carmona, I. Anghinoni, S.A.G. Junior dan E. Marcolin, 2010. Flooded rice yield as affected by levels of water salinity in different stages of its cycle. *Revista Brasileira de Ciência do Solo* 34: 175-182

Gadgil, A. 1998. Drinking Water in Developing Countries. *Annual Review of Energy and the Environment* 23: 253–286

Ghosh B, M. N. Ali, dan G. Saikat. 2016. Response of Rice under Salinity Stress: A Review Update. *Rice Research* 4:167

Girma, B.T. H.M. Ali dan A. A. Gebeyaneh. 2016. Effect of salinity on final growth stage of different rice genotypes. *Asian Journal of Agriculture Resource* 11: 1-9

Grattan, S.R., F.J. Diaz, F. Pedrero, dan G.A. Vivaldi. 2015. Assessing the suitability of saline wastewaters for irrigation of *Citrus*spp.: Emphasis on boron and specific-ion interactions. *Agricultural Water Management* 157: 48–58

Gregorio, G. B., D. Senadhira, R.D. Mendoza, N. L. Manigbas, J.P. Roxas, dan C.Q. Guerta. 2002. Progress in breeding for salinity Tolerance and associated abiotic stresses in rice. *Field Crops Resource* 76:91-101

Grish, D. H. 1960. Rice: Tropical Agricultural Series. Longman, London pp 7

Gouia H, M.H. Ghorbal dan B. Touraine. 1994. Effects of NaCl on flows of N and mineral ions and NO³⁻ reductase rate within whole plants of salt-sensitive bean and salt tolerant cotton. *Plant Physiology* 105:1407-1418

Hambali, A. dan I. Lubis. 2015. Evaluasi produktivitas beberapa varietas padi. *Buletin Agrohorti* 2 : 137-145



**PENGARUH PERSEMAIAN SALIN BASAH DAN KERING TERHADAP PERTUMBUHAN DAN HASIL
PADI (*Oryza sativa L.*)
TERCEKAM SALINITAS**

DEVI ALVIOLIANA, Ir. Budiaستuti Kurniasih, M.Sc., Ph.D; Rani Agustina Wulandari, S.P., M.P., Ph.D.; Prof. Dr. Ir. Did

Universitas Gadjah Mada, 2020 | Diunduh dari <http://etd.repository.ugm.ac.id/>

Hanudin, E. 2000. Pedoman analisis kimia tanah. Agroteksos, Yogyakarta pp 4-7

Hariadi, Y.C., A. Y. Nurhayati, S. Soeparjono, dan I. Arif. 2015. Screening six varieties of rice (*Oryza sativa*) for salinity tolerance. Procedia Environmental Sciences 28 : 78 – 87

Hasegawa, P.M., R.A. Bressan, J.K. Zhu, and H.J. Bohnert. 2000. Plant cellular and molecular response to high salinity. Annual Review of Plant Physiology and Plant Molecular Biology 51:463–499

Heath RL dan Packer L. 1968. Photoperoxidation in isolated chloroplasts. I. Kinetics and stoichiometry of fatty acid peroxidation. Archives in Biochemistry and Biophysics 125:189–198.

Heenan, D.P., L.G. Lewin, dan D.W. McCaffery. 1988. Salinity tolerance in rice varieties at different growth stages. Australian Journal of Experimental Agriculture 28:343–349

Hingston, F.J. dan Gailitis. 1976. The geographic variation of salt precipitated over Western Australia. Australian Journal of Soil Research 14: 319–335

Hoang, T. M. L., T. N. Tran, T.K.T. Nguyen, B. Williams, P. Wurm, S. Bellairs, dan S. Mundree. 2016. Improvement of Salinity Stress Tolerance in Rice: Challenges and Opportunities. Agronomy 6 : 54

Hongtao, J., J. M. Pardo, G. Batelli, Van Oosten, J.B. Michael, A. Ray, dan X. Li. 2015. The Salt Overly Sensitive (SOS) Pathway: Established and Emerging Roles. Molecular Plant 2 : 275–286

Horie, T., I. Karahara, dan M. Katsuhara. 2012. Salinity tolerance mechanisms in glycophytes: An overview with the central focus on rice plants. Rice 5 : 11

Hussain, S., F. Khan, W. Cao, L. Wu, dan M. Geng. 2016. Seed priming alters the production and detoxification of reactive oxygen intermediates in rice seedlings grown under sub-optimal temperature and nutrient supply. Frontiers 23 : 487 - 495

Hutajulu, H.F., Rosmayati, dan S. Ilyas. 2013. Pengujian respon pertumbuhan beberapa varietas padi sawah (*Oryza sativa L.*) akibat cekaman salinitas. Jurnal Online Agroteknologi 4 : 1101-1109

Islam, M. S., A. H. Molla, dan H. A. Quayum. 2004. Effect of different levels of salinity on grain filling in rice. Bulletin of the Institute of Tropical Agriculture, Kyushu University, 24: 19-22

Jisha, K.C., K. Vijayakumari, dan J.T. Puthur. 2013. Seed priming for abiotic stress tolerance: an overview. Acta Physiologia Plantarum 35:1381-1396

Junglee, S., L. Urban, H. Sallanon, dan F. Lopez-Lauri. 2014. Optimized assay for hydrogen peroxide determination in plant tissue using potassium iodide. American Journal of Analytical Chemistry 5: 730-736

Kanawapee, N., J. Sanitcon, W. Lontom, dan P. Threerakulpisut. 2012. Evaluation of salt tolerance at the seedling stage in rice genotypes by growth performance, ion accumulation, proline and chlorophyll content. Plant Soil 358:235–249

Kao, C. H. 2015. Mechanisms of salt tolerance in rice plants : Na⁺ transporter. Crop, Environment, and Bioinformatics 12 : 113 – 119



- Karan, R., T. DeLeon, H. Biradar, dan P.K. Subudhi. 2012. Salt stress induced variation in DNA methylation pattern and its influence on gene expression in contrasting rice genotypes. *PLoS ONE* 6 : 40-53
- Katiyar, S., dan R.S. Dubey. 1992. Influence of NaCl salinity on behaviours of nitrate reductase and nitrite reductase in rice seedlings differing in salt tolerance. *Journal of Agronomy and Crop Science*. 169: 289-297
- Khaliq, A., F. Aslam, A. Matloob, S. Hussain, M. Geng, dan A. Wahid. 2015. Seed priming with selenium: consequences for emergence, seedling growth, and biochemical attributes of rice. *Biology Trace Element Resources* 166: 236–244
- Kibria, M.G., M. Hossain, Y. Murata, and Md. A. Hoque. 2017. Antioxidant defense mechanisms of salinity tolerance in rice genotypes. *Rice Science* 24: 155-162
- Kooyers, N.J. 2015. The evolution of drought escape and avoidance in natural herbaceous populations. *Plant Science* 234: 155-162
- Kumar, K., M. Kumar, F.R. Kim, H. Ryu, dan Y.G. Cho. 2013. Insight into genomics of salt stress response in rice. *Rice* 6:27
- Kurniasih, B., H. Greenway, dan T.D. Colmer. 2017. Energetics of acclimation to NaCl by submerged, anoxic rice seedlings. *Annals of Botany* 119: 129–142
- Kuswantoro, H. 2011. Response of soybean genotypes to waterlogging. *Jurnal Agronomi Indonesia* 39:19-23
- Lafitte, H.R., A. Ismail, dan J. Bennett. 2004. Abiotic stress tolerance in rice Fore asia progress and the future. International Rice Research Institute, Manila pp 13
- Lennard, B.E.G. 2003. The interaction between waterlogging and salinity in higher plants: causes, consequences and implications. *Plant and Soil* 253: 35–54
- Lin, C.C. dan C.H. Kao. 2000. Effect of NaCl stress on H₂O₂ metabolism in rice leaves. *Plant Growth Regulation*, 30: 151-155
- Linares, O.F. 2002. African rice (*Oryza glaberrima*): History and future potential. *Proceeding. National Academic Science USA*99: 16360–16365
- Listyawati, S. 1994. Pengaruh Radiasi Sinar Gama Co 60 Terhadap Aktivitas Nitrat Reduktase dan Struktur Anatomi *Brassica campestris* Linn. *Fakultas Biologi, UGM. Skripsi* pp 37
- Liu, P., L.Yin, S. Wang, M. Zhang, X. Deng, S. Zhang, dan K. Tanaka. 2015. Enhanced root hydraulic conductance by aquaporin regulation accounts for silicon alleviated salt-induced osmotic stress in *Sorghum bicolor* L. *Environmental and Experimental Botany* 111: 42–51
- Mahmood, A., T. Latif, and M.A. Khan. 2009. Effect of salinity on growth, yield and yield components in Basmati rice germplasm. *Pakistan Journal of Botany* 41: 3035-3045
- Mass,L O.F. 2002. African rice (*Oryza glaberrima*): History and future potential. *Proceedings of the National Academy of Science of the United States of America* 99 : 16260 - 16365



**PENGARUH PERSEMAIAN SALIN BASAH DAN KERING TERHADAP PERTUMBUHAN DAN HASIL
PADI (*Oryza sativa L.*)
TERCEKAM SALINITAS**

DEVI ALVIOLIANA, Ir. Budiaستuti Kurniasih, M.Sc., Ph.D; Rani Agustina Wulandari, S.P., M.P., Ph.D.; Prof. Dr. Ir. Didik

Universitas Gadjah Mada, 2020 | Diunduh dari <http://etd.repository.ugm.ac.id/>

Mahajan, S., S.K. Sopoy, dan N. Tuteja. 2006. CBL-CIPK paradigm: Role in calcium and stress signaling in plants. Procedia Indian National Science Academy 72: 63–78

Martinez-Atienza, J., X. Jiang, B. Garciadeblas, I. Mendoza, J-K. Zhu, J.M. Pardo, dan F. J. Quintero. 2007. Conservation of the salt overly sensitive pathway in rice. Plant Physiology 143:1001-1012

Meatyard, B., dan M. MacDonald. 2018. Measuring Stomatal Density. <<http://www.saps.org.uk/secondary/teaching-resources/299-measuring-stomatal-density>>. Diakses pada 28 Agustus 2018

Miro, B. dan M. I. Abdelbagi. 2013. Tolerance of anaerobic conditions caused by flooding during germination and early growth in rice (*Oryza sativa L.*). Frontiers in Plant Science 4 : 1-18

Misra, N, dan U.N. Dwiverdi. 1990. Nitrogen assimilation in germinating *Phaseolus aureus* under saline stress. Journal of Plant Physiology 135:719-724

Mondal, S., dan T.H.Borromeo. 2016. Screening of salinity tolerance of rice at early seedling stage. Journal of Bioscience and Agriculture Research 1 : 843 - 847

Moradi, F. dan A.M. Ismail, 2007. Responses of photosynthesis, chlorophyll fluorescence and ROS- scavenging systems to salt stress during seedling and reproductive stages in rice. Annals of Botany, 99: 1161- 1173

Muchate, N.S., G.C. Nikalje, N.S. Rajurkar, P. Suprasanna, dan T.D. Nikam. 2016. Plant Salt Stress: Adaptive Responses, Tolerance Mechanism and Bioengineering for Salt Tolerance. Botanical Review 82 : 371 – 406

Munns R. 2005. Genes and salt tolerance: bringing them together. New Phytologist 167: 645 – 663

Munns, R. 2002. Comparative physiology of salt and water stress. Plant Cell Environment 2:239–250

Munns, R. dan M. Tester. 2008. Mechanisms of Salinity Tolerance. CSIRO Plant Industry, Canberra pp 651-672

Munns, R., P. A. Wallace, N. L. Teakle, dan T. D. Colmer. 2010. Measuring Soluble Ion Concentrations (Na^+ , K^+ , Cl^-) in Salt-Treated Plants. Plant Stress Tolerance. Methods and Protocols, Springer pp 371-382

Nemati, I., F. Moradi, S. Gholizadeh, M.A. Esmaeili, dan M.R. Bihamta. 2011. The effect of salinity stress on ions and soluble sugars distribution in leaves, leaf sheaths and roots of rice (*Oryza sativa L.*) seedlings. Plant Soil Environment 57: 26-33

Nishiuchi, S., T. Yamauchi, H. Takahashi, L. Kotula, dan M. Nakazono. 2012. Mechanisms for coping with submergence and waterlogging in rice. Rice 5 : 1 - 14

Pandia, R.A. 2015. Ketahanan Bibit Padi (*Oryza sativa L.*) terhadap Salinitas pada Kondisi Lembab dan Tergenang. Fakultas Pertanian Universitas Gadjah Mada. Skripsi pp 38

Paul, S. dan A. Roychoudhury. 2016. Seed priming with spermine ameliorates salinity stress in the germinated seedlings of two rice cultivars differing in their level of salt tolerance. International Journal Society for Tropical Plant Research. 3 : 616 - 633



**PENGARUH PERSEMAIAN SALIN BASAH DAN KERING TERHADAP PERTUMBUHAN DAN HASIL
PADI (*Oryza sativa L.*)
TERCEKAM SALINITAS**

DEVI ALVIOLIANA, Ir. Budiastuti Kurniasih, M.Sc., Ph.D; Rani Agustina Wulandari, S.P., M.P., Ph.D.; Prof. Dr. Ir. Didik Pramono, M.T. Universitas Gadjah Mada, 2020 | Diunduh dari <http://etd.repository.ugm.ac.id/>

Platten, J.D., O. Cotsafits, P. Berthomieu, H. Bohnert, R. Fairbairn, T. Horie, R.A. Leigh, H.X. Lin, S. Luan, Pm. Maser, O. Pantoja, A.Rodriguez-Navarro, D.P. Schachtman, J.I. Schroeder, H. Sentenac, N. Uozumi, A-A. Very, J-K. Zhu, E.S. Dennis, dan M. Tester. 2006. Nomenclature for HKT transporters, key determinant of plant salinity tolerance. Trends Plant Science 11 : 372 - 374

Podmor, C. 2009. Dryland Salinity – Causes and Impacts. Natural Resource Advisory Services, Wagga Wagga app 4

Qiang, H., B.R. Silliman, dan B. Cui. 2011. Inconporating thresholds into understanding salinity tolerance: A study using salt-tolerant plants in salt marshes. Ecology and Evolution 16:6326-6333

Qureshi R.H., M. Aslam, dan A. Javid. 2003. Productivity enhancement in the salt affected lands of Joint Satiana Pilot Project Area of Pakistan. Journal of Crop Production 7: 277-297

Rad, H.E., F. Aref, dan M. Rezai. 2012. Response of Rice to Different Salinity Levels during Different Growth Stages. Research Journal of Applied Sciences, Engineering and Technology 17 : 3040-3047

Rao, K.R. dan A. Gnaham. 1990. Inhibition of nitrate and nitrateductase activity by salinity stress in Sorghum vulgare. Phytochemistry 29:1047-1049

Raichur, K. 2009. Nursery Raising (Wet Nursery Method) in Paddy. <<http://agropedia.iitk.ac.in/content/nursery-raising-wet-nursery-method-paddy>>. Diakses pada 3 Maret 2018

Raichur, K. 2009. Nursery Raising (Dry Nursery Method) in Paddy. <<http://agropedia.iitk.ac.in/content/nursery-raising-dry-nursery-method-paddy>>. Diakses pada 3 Maret 2018

Reddy, A.M., R.M. Frances, S.N. Rasool, dan V.R.P. Reddy. 2014. Breeding for tolerance stress triggered by salinity in rice. International Journal of Applied Biology and Pharmacy Technology 5 : 167–176

Reddy, I.N.B.L., S.M. Kim, B.K. Kim, I.S.Yoon, dan T.R. Kwon. 2017. Identification of rice accessions associated with K^+/Na^+ ratio and salt tolerance based on physiological and molecular responses. Rice Science 24 : 360 - 364

Rezaei, M., N. Davatgar, N. Pirmoradian, dan M.R. Khaledian. 2012. Effect of intermittent irrigation with saline water on rice yield in Rasht, Iran. Acta Agricultura Slovenica 101 : 49 – 57

Richards, L. 1954. Diagnosis and improvement of saline and alkali soils. Department of Agriculture Handbook, Washington, DC: US Government Printing Office pp 147

Ridwansyah, B., T.R. Basoeki, P.B., Timotiwu, dan Agustiansyah. 2010. Pengaruh dosis pupuk nitrogen, fosfor, dan kalium, terhadap produksi benih padi varietas mayang pada tiga lokasi di Lampung Utara. Agrotropika 15:68-72

Rontein, D., G. Basset, A.D. Hanson. 2002. Metabolic engineering of osmoprotectant accumulation in plants. Metabolic Engineering 4: 49–56



Rubel, M.H., L. Hassan, M. M. Islam, A.H.K. Robin, dan M.D. J. Alam. 2014. Evaluation of rice genotypes under salt stress at the seedling and reproductive stages using phenotypic and molecular markers. *Pakistan Journal of Botany* 2 : 423 - 432

Sagi M, Savidov NA, Vov NPL, Lips SH. 1997. Nitrate reductase and molybdenum cofactor in annual ryegrass as affected by salinity and nitrogen source. *Physiology Plantarum* 99:546-553

Sahi, C., A.Singh,E.Bluwmwald, danA. Grover. 2006. Beyond osmolytes and transporters: novel plant salt stress tolerance-related genes fromtranscriptional profiling data. *Physiology Plantarum* 127: 1–9

Sairam, R.K., K.V. Veerabhadra Rao dan G.C. Srivastava. 2002. Differential response of wheat genotypes to long term salinity stress in relation to oxidative stress, antioxidant activity and osmolyte concentration. *Plant Science*, 163: 1037-1046

Sarangi, S.K., S. Singh, V. Kumar, A.K. Srivastava, P.C. Sharma, and D.E. Johnson. 2019. Tillage and crop establishment options for enhancing the productivity, profitability, and resource use efficiency of rice-rabi systems of the saltaffected coastal lowlands of eastern India. *Field Crop Research*

Sedghi,I M., A. Nemati, dan B. Esmaielpour. 2010. Effect of seed priming on germination and seedling growth of two medicinal plants under salinity. *Emirates Journal of Food and Agriculture* 22 : 130-139

Setter, T.L., I. Waters, S.K. Sharma, K.N.Singh, N. Kulshreshtha, N.P.S. Yaduvanshi, P.C. Ram, B.N. Singh, J. Rane, G. McDonald, H. Khabaz-Saveri, T.B. Biddulph, R. Wilson, I. Barclay, R. McLean, dan M. Cakir. 2009. Review of wheat improvement for waterlogging tolerance in Australia and India: the importance of anaerobiosis and element toxicities associated with different soils. *Annals of Botany* 103:221–235

Shannon, M. C., J. D. Rhoades, J. H. Draper, S. C. Scardaci, dan M. D.Spyres. 1998. Assessment of salt tolerance in rice cultivars in response to salinity problems in California. *Crop Science* 38: 394–398

Shylaraj, K.S. dan N.K. Sasidharan. 2005. VTL 5: A high yielding salinity tolerant rice variety for the coastal saline ecosystems of Kerala. *Journal of Tropical Agriculture* 43 : 25-28

Soemartono, B dan R. Hardjono. 1980. *Bercocok Tanam Padi*. C.V. Yasaguna, Jakarta

Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor dan H.L. Miller. 2007. *IPCC Fourth Assessment Report (AR4) : Climate Change 2007: The Physical Science Basis*. UNEP pp 21

Sripinyowanich, S., P. Klomsakul, B. Boonburapong, T. Bangyekhun, T. Asami, H.Y. Gu, T. Buaboocha, and S. Chadchawan. 2013. Exogenous ABA induces salt tolerance in indica rice (*Oryza sativa L.*): the role of OsP5CS1 and OsP5CR gene expression during salt stress. *Environmental and Experimental Botany* 86: 94–105

Srivastava, A.K. dan P. Suprasanna. 2015. Redox regulated mechanisms: Implications for enhancing plant stress tolerance and crop yield. In: Giridhar Kumar Pandey (Eds.), *Elucidation of Abiotic Stress Signaling in Plants*. Springer, Netherland 191–205



**PENGARUH PERSEMAIAN SALIN BASAH DAN KERING TERHADAP PERTUMBUHAN DAN HASIL
PADI (*Oryza sativa L.*)
TERCEKAM SALINITAS**

UNIVERSITAS
GADJAH MADA
Universitas Gadjah Mada, 2020 | Diunduh dari <http://etd.repository.ugm.ac.id/>
Suharno. 2005. Bahan Kuliah Serealia. <<http://www.distan.pemda-diy.go.id>>. Diakses pada tanggal 13 Januari 2018

Suriya-anuroj, D., N. Supapoj, T. Toojinda, and A. Vanavichit. 2004. Relative leaf water content as an efficient method forevaluating rice cultivars for tolerance to salt stress. Science Asia 30 : 411-415

Szabolcs, I. 1974. Salt Affected Soils in Europe. Research Institute for Soil Science and Agricultural Chemistry of The Hungarian Academy of Sciences, Budapest pp 53

Takahasih, N. 1984. Defferentiation of ecotypes in *Oryza sativa L.* Elsevier, Amsterdam pp 9

Tanalasse, V.L. 2012. Studi komunitas gulma di pertanaman gandaria (*Bouea macrophylla Griff.*) pada tanaman belum menghasilkan dan menghasilkan diDesa Urimessing Kecamatan Nusaniwe Pulau Ambon. Jurnal Budidaya Pertanian Universitas Pattimura 8: 7-12

Tanentzap, F.M., A. Stempel, dan P. Ryser. 2015. Reliability of leaf relative water content (RWC) measurements after storage: consequences for in situ measurements. Botany 9: 535-541

Tester, M., dan R. Davenport. 2003. Na⁺ tolerance and Na⁺ transport in higher plants. Annals of Botany 91 : 503–527

Thomson, M.J., M. de Ocampo, dan J. Egudane. 2010. Characterizing the Saltol quantitative trait locus for salinity tolerance in rice. Rice 3 : 148–160

Tobing, M. P. L., O. Ginting, S. Ginting, dan R. K. Damanik. 1995. Agronomi Tanaman Makanan I. Universitas Sumatera Utara, Medan pp 15

Tunceturk, M., R. Tunceturk, B. Yildrim, dan V. Ciftci. 2011. Effectof salinity stress on plant fresh weight and nutrient composition of some Canola (*Brassica napus L.*) cultivars. African Journal of Biotechnology 10 : 1827 – 1832

Tuteja, N. 2007. Mechanisms of High Salinity Tolerance in Plants, chapter twenty-four. Methods in Enzymology. 428: 419-438

USDA. 2016. Rice Outlook December 2016. <http://www.ers.usda.gov/publications/pubdetails/?pubid=85436>. Diakses Pada 11 Januari 2018

Vaughan, D.A. 1994. The Wild Relatives of Rice. A Genetic Handbook. International Rice Research Institute, Manila pp 15

Vartapetian, B.B. 1978. Ultrastructure Studies as a Means of Evaluating Plant Tolerance to Flooding. The Ecology and Management of Wetlands. Springer, New York pp 54

Velikova, V., Yordanov, I. and Edreva, A. 2000. Oxidative Stress and Some Antioxidant Systems in Acid RainTreated Bean Plants: Protective Role of Exogenous Polyamines. Plant Science 151: 59-66

Viégas, R.A., A.R.B Mello, dan J.A.G. Silveria.1999. Nitrate reductaseactivity and proline accumulation in cashew in response to NaCl saltshock. Revista Brasileira de Fisiologia Vegetal 11: 21-28



**PENGARUH PERSEMAIAN SALIN BASAH DAN KERING TERHADAP PERTUMBUHAN DAN HASIL
PADI (*Oryza sativa L.*)
TERCEKAM SALINITAS**

UNIVERSITAS
GADJAH MADA
Universitas Gadjah Mada, 2020 | Diunduh dari <http://etd.repository.ugm.ac.id/>
Vineis, P., Q. Chan, dan A. Khan. 2011. Climate change impacts on water salinity and health.
Journal of Epidemiology and Global Health 1 : 5– 10

Wang, Z., Z. Chen, J. Cheng, Y. Lai dan J. Wang. 2012. QTL analysis of Na+ and K+ concentrations in roots and shoots under different levels of NaCl stress in rice (*Oryza sativa L.*). PLoS One 7: 51-62

Wyn Jones, R.G., Brady, C.J., Spiers, J. 1981. Ionic and osmotic relations in plant cells. In : Recent advances in the biochemistry of cereals. Laidman, D.L., Wyn Jones, R.G., eds. Academic Press, New Yorkpp. 63-103

Yoshida, S. 1973. Effects of Temperature on Growth of the Rice Plant (*Oryza sativa L.*) in a Controlled Environment. Soil Science and Plant Nutrition, 19, 299-310

Yeo, A.R. , S.A. Flowers, G. Rao, K. Welfare, N. Senanayake, dan T.J. Flowers. 1999. Silicon reduces sodium uptake in rice (*Oryza sativa L.*) in saline conditions and this is accounted for by a reduction in the transpirational bypass flow. Plant Cell and Environment 22 : 559-565

Yullianida, S. W. Ardie, dan H. Aswidinoor. 2015. Respon dan produktivitas padi rawa terhadap cekaman rendaman stagnan untuk pengembangan di lahan rawa lebak. Jurnal Agronomi Indonesia 43 : 15-22

Zafar, S., dan S. Shokat. 2015. Assessment of salinity tolerance in rice using seedling based morpho-physiological indices. Advanced in Life Science 4 : 142-149

Zahra, A.R.F., D.M. De Costa dan W.A.J.M. De Costa. 2016. Identification of differentially-expressed genes in response to salt stress in the salt-tolerant Sri Lankan rice variety At354. Journal National Science Foundation Sri Lanka 41: 93-112

Zeng, L. dan M.C. Shannon . 2000. Effects of Salinity on Grain Yield and Yield Components of Rice at Different Seeding Densities. Agronomy Journal 92:418–423

Zhang, Y., X. Peng, T. Chai, C. Zhang, dan J. Liu. 2011. Structure and function of tonoplast Cation/H+ antiporters in plant: a review. Chinese Journal of Biotechnology 4:546-560

Zhou, J. L., X. F. Wang, Y.L. Jiao, Y.H. Qin, X.G. Liu, K. He, C. Chen, L.G. Ma, J. Wang, L.Z. Xiong, Q.F. Zhang, L.M. Fan, dan X. W. Deng. 2007. Global genome expression analysis of rice in response to drought and high-salinity stresses in shoot, flag leaf, and panicle. Plant Molecular Biology 5: 591–608

Zhou, M., P. Johnson, G. Zhou, C. Li, dan R. Lance. 2011. Quantitative trait loci for waterlogging tolerance in a barley cross of franklin × yuyaoxiangtian erleng and the relationship between waterlogging and salinity tolerance. Crop Science 52: 2082-2088

Zhou, Y., P.Yang, F.Cui, F. Zhang, X.Luo, dan J. Xie. 2016. Transcriptome analysis of salt stress responsiveness in the seedlings of Dongxiang wild rice (*Oryza rufipogon* Griff.). PLoS ONE 1 : 439 - 444

Zhu, J.K. 2002. Salt and drought stress signal transduction in plants. Annual Review of Plant Biology 53: 247–273