DAFTAR PUSTAKA

Abdelaziz, M.N., T.D. Xuan, A.M.M. Mekawy, H. Wang, and T.D. Khanh. 2018. Relationship of Salinity Tolerance to Na^+ Exclusion, Proline Accumulation, and Antioxidant Enzyme Activity in Rice Seedlings. *Agriculture* 8(166): 1-12.

Abdel-Farid, I.B., M.R. Marghany, M.M. Rowezek, and M.G. Sheded. 2020. Effect of Salinity Stress on Growth and Metabolomic Profiling of *Cucumis sativus* and *Solanum lycopersicum*. *Plants* 9(1626): 1-19.

Acosta-Motos, J.R., M.F. Ortuno, 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) : 1-38.

Ahmad, P., M. M. Azooz, and M. N. V. Prasad. 2013. *Ecophysiology and Responses of Plrcants Under Salt Stress.* Springer. New York. p. 16.

Alam, M.Z., T. Stuchbury, R.E.L. Naylor, and M.A. Rashid. 2004. Effect of Salinity on Growth of Some Modern Rice Cultivars. *Journal of Agronomy* 3(1): 1-10.

Arzie, D., A. Qadir dan F. C. Suwarno. 2015. Pengujian Toleransi Genotipe Padi (*Oryza sativa* L.) terhadap Salinitas pada Stadia Perkecambahan. *Buletin Agrohorti* 3(3): 377–386.

Atabayeva, S., A. Nurmahanova, S. Minocha, A. Ahmetova, S. Kenzhebayeva, S. Aidosova, A. Nurzhanova, A. Zhardamaiieva, S. Asrandina, R. Alybayeva, and T. Li. 2013. The Effect Of Salinity On Growth And Anatomical Attributes Of Barley Seedling (*Hordeum vulgare* L.). *African Journal of Biotechnology* 12(18) : 2366-2377.

Aybeke, M. 2016. Root Anatomical Plasticity In Response To Salt Stress Under Real and Full-Season Field Conditions and Determination of New Anatomic Selection Characters For Breeding Salt-Resistant Rice (*Oryza sativa* L.). *Trakya University Journal of Natural Sciences* 17(2) : 87-104.

Bae E.J., K.S. Lee, M.R. Huh, and C.S. Lim. 2012. Silicon Significantly Alleviates the Growth Inhibitory Effects of NaCl In Salt-Sensitive ‘Perfection’ and ‘Midnight’ Kentucky Bluegrass (*Poa pratensis* L). *Horticulture, Environment, and Biotechnology* 53: 477-483.

Barus, W.A., A. Rauf, R. Rosmayati, C. Hanum, and D.M. Tarigan. 2018. Proline Content Variation in Some Rice Varieties Under Salinity Stress. *Proceeding International Conference on Sustainable Agriculture and Natural Resources Management* 2(1) : 1-4.

Barus, W. A., A. Rauf, B. Sengli, J. Damanik, and R. Rosmayati. 2013. Morphology and Physiology Characteristic of Some Varities of Rice Under Salinity Stress. *Proceedings of The 3rd Annual International Conference Syiah Kuala University (AIC Unsyiah),* pp. 75–79.

Bates, L.S., R.P. Waldren, and I.D. Teare. 1973. Rapid Determination of Free Proline for Water Stress Studies. *Plant Soil* 39(1): 205-207.

BBPADI. 2019. *Varietas Padi*. http://bbpadi.litbang.pertanian.go.id/index.php/varietas-padi/inbrida-padi-sawah-inpari diakses tanggal 14 Februari 2020.

Benincasa, P., R. Pace, M. Quinet, and S. Lutts. 2013. Effect of Salinity and Priming on Seedling Growth in Rapeseed (*Brassica napus* var *oleifera* Del.). *Acta Scientiarum-Agronomy* 35(4): 479–486.

BPPP. 2016. Varietas Padi Toleran terhadap Lahan Salin Terus Dikembangkan. http://www.litbang.pertanian.go.id/info-teknologi/2626/. Diakses tanggal 14 Februari 2020.

BPS. 2014. Luas Lahan Sawah Menurut Provinsi (ha) tahun 2003-2015. https://www.bps.go.id/linkTableDinamis/view/id/895 diakses tanggal 14 Februari 2020.

BPTP Jateng. 2015. Lokakarya Strategi Pengelolaan Lahan Salin Mendukung Peningkatan Produksi Padi di Jawa Tengah. http://jateng.litbang.pertanian.go.id/index.php/artikel/berita/item/145-lokakarya-strategi-pengelolaan-lahan-salin-mendukung-peningkatan-produksi-padi-di-jawa-tengah. Diakses tanggal 14 Februari 2020.

Byrt, C.S., R. Munns, R.A. Burton, M. Gilliham, and S. Wege. 2018. Root Cell Wall Solutions for Crop Plants in Saline Soils. *Plant Science* 269: 47-55.

Carillo, P., M.G Annunziata, G. Pontecorvo, A. Fuggi, and P. Woodrow. 2011. Salinity Stress and Salt Tolerance. *Abiotic Stress In Plants – Mechanisms and Adaptations*. Intech Publisher. Kroasia, p 24.

Castillo, E. G., T.P. Tuong, A. Ismail, and K. Inubushi. 2007. Response to Salinity in Rice: Comparative Effects of Osmotic and Ionic Stresses. *Plant Production Science* 10(2): 159–170.

Chutipaijit, S., S. Cha-Um, and K. Sompornpailin. 2009. Differential Accumulations of Proline and Flavonoids in Indica Rice Varieties Against Salinity. *Pakistan Journal of Botany* 41(5): 2497–2506.

Colmer, T.D. 2003. Long-Distance Transport Of Gases In Plants: A Perspective On Internal Aeration and Radial Oxygen Loss From Roots. *Plant, Cell and Environment* 26: 17-36.

Da Cunha, K.P.V., andC.W.A. do Nascimento. 2009. Silicon Effects on Metal Tolerance and Structural Changes In Maize (*Zea mays* L.) Gown on a Cadmium and Zinc Enriched Soil. *Water, Air, and Soil Pollution*. 2009 197(2) : 323–330.

Devi, S., A. Fatchiya, dan D. Susanto. 2016. Kapasitas Kader dalam Penyuluhan Keluarga Berencana di Kota Palembang, Provinsi Sumatera Selatan 12(2): 144-156.

Fan, X., X. Wen, F. Huang, Y.Cai, and K. Cai. 2016. Effects of Silicon On Morphology, Ultrastructure and Exudates Of Rice Root Under Heavy Metal Stress. *Acta Physiologiae Plantarum* 38: 196-204.

Fatikhasari, Z. 2019. Respons Pertumbuhan dan Ketahanan Padi (*Oryza sativa* L. 'Sembada Merah') Dengan Pemberian Kalsium Silikat Pada Kondisi Stres Salinitas. [Tesis]. Universitas Gadjah Mada: Yogyakarta.

Fleck, A.T., T. Nye, C. Repenning, F. Stahl, M. Zahn, and M.K. Schenk. 2011. Silicon Enhances Suberization and Lignification In Roots of Rice (*Oryza sativa*). *Journal of Experimental Botany* 62(6) : 2001-2011.

Gomes, M.A.C, I.A. Pestana, C. Santa-Catarina, R.A. Hauser-Davis, and M.S. Suzuki. 2017. Salinity Effects on Photosynthetic Pigments, Proline, Biomass and Nitric Oxide in *Salvinia auriculata* Aubl. *Acta Limnologica Brasiliensia* 29(9) : 1-13.

Guntzer, F., C. Keller, and J. Meunier. 2012. Benefits of Plant Silicon for Crops: A Review. *Agronomy for Sustainable Development* 32(1): 201–213.

Guo, P., M. Baum, S. Grando, S. Ceccarelli, G. Bai, R. Li, M. von Korff, R.K. Varshney, A. Graner, and J. Valkoun. 2009. Differentially Expressed Genes Between Drought-Tolerant and Drought-Sensitive Barley Genotypes In Response to Drought Stress During The Reproductive Stage. *Journal of Experimental Botany* 60(12): 3531-3544.

Hakim, M.A., A.S. Juraimi, M.M. Hanafi, M.R. Ismail, A. Selamat, M.Y. Rafii, and M.A. Latif. 2014. Biochemical and Anatomical Changes and Yield Reduction in Rice (*Oryza sativa* L.) under Varied Salinity Regimes. *Biomed Research International* 2014: 1-14.

Hameed, M., M. Ashraf, M.S.A. Ahmad, and N. Naz. 2010. Structural and Functional Adaptations in Plants for Salinity Tolerance. M. Ashraf et al. (eds.), Plant Adaptation and Phytoremediation, p 161-162.

Harborne, J. B. 1984. *Phytochemical Methods : A Guide to Modern Techniques of Plant Analysis 2nd*. Chapman and Hall. New York, p 216.

Hasan, R. and H. Miyake. 2017. Salinity Stress Alters Nutrient Uptake and Causes the Damage of Root and Leaf Anatomy in Maize. ICBS Conference Proceedings, International Conference on Biological Science (2015). KnE Life Sciences, pp 219–225.

Heidari, M. 2012. Effects of Salinity Stress on Growth, Chlorophyll Content and Osmotic Components of Two Basil (*Ocimum basilicum* L.) Genotypes. *African Journal of Biotechnology* 11(2) : 379-384.

Hnilickova, H., F. Hnilicka, J. Martinkova, and K. Kraus. 2017. Effects of Salt Stress on Water Status, Photosynthesis and Chlorophyll Fluorescence of Rocket. *Plant, Soil and Environment* 63(8) : 362-367.

Hoang, T.M.L, T.N Tran, T.K.T Nguyen, B. Williams, P. Wurm, S. Bellairs and S.Mundree. 2016. Improvement of Salinity Stress Tolerance in Rice: Challenges and Opportunities. *Agronomy Journal* 6(54) : 1-23.

Hussain, S., X. Cao, C. Zhong, L. Zhu, M.A. Khaskheli, S. Fiaz, J. Zhang, and Q. Jin. 2018. Sodium Chloride Stress During Early Growth Stages Altered

Physiological and Growth Characteristics of Rice. *Chilean Journal of Agricultural Research* 78(2): 183–197.

Hutajulu, H.F., Rosmayati, dan S. Ilyas. 2013. Pengujian Respons Pertumbuhan Beberapa Varietas Padi Sawah (*Oryza sativa* L.) Akibat Cekaman Salinitas. *Jurnal Online Agroekoteknologi* 1(4) : 1101-1109.

Ikhsanti, A., B. Kurniasih, and D. Indradewa. 2018. Pengaruh Aplikasi Silika terhadap Pertumbuhan dan Hasil Tanaman Padi (*Oryza sativa* L.) pada Kondisi Salin. *Vegetalika* 7(4): 1–11.

Irakoze, W., H. Prodjinoto, S. Nijimbere, G. Rufyikiri, and S. Lutts. 2020. NaCl and Na_2SO_4 Salinities Have Different Impact on Photosynthesis and Yield-Related Parameters in Rice (*Oryza sativa* L.). *Agronomy* 10(864) :1-12.

ITIS. 2020. *Oryza sativa* L. https://www.itis.gov. Diakses tanggal 20 Februari 2020.

Jamil, M., D.B. Lee, K.Y. Jung, M. Ashraf, S.C. Lee, and E.S. Rha. 2006. Effect of Salt (NaCl) Stres s on Germination and Early Seedling Growth of Four Vegetables Species. *Journal of Central European Agriculture* 7(2): 273–282.

Jamil, M., M. Ashraf, S. Rehman, M. Ahmad, and E.S. Rha. 2012. Salinity Induced Changes in Cell Membrane Stability, Protein and RNA Contents. *African Journal of Biotechnology* 11(24): 6476-6483.

Joshi, R. and P. Kumar. 2012. Lysigenous Aerenchyma Formation Involves Non-Apoptotic Programmed Cell Death in Rice (*Oryza sativa* L.) Roots. *Physiology and Molecular Biology of Plants* 18(1): 1-9.

Junandi, Mukarlina, dan R. Linda. 2019. Pengaruh Cekaman Salinitas Garam NaCl Terhadap Pertumbuhan Kacang Tunggak (*Vigna unguiculata* L. Walp) Pada Tanah Gambut. *Jurnal Protobiont* 8(3) : 101-105.

Kamalia, S., P. Dewanti, dan R. Soedradjad. 2017. Teknologi Hidroponik Sistem Sumbu Pada Produksi Selada Lollo Rossa (*Lactuca Sativa* L.) dengan Penambahan $CaCl_2$ sebagai Nutrisi Hidroponik. *Jurnal Agroteknologi* 11 (1) : 96-104.

Khan, A., A.L. Khan, S. Muneer, Y. Kim, A. Al-Rawahi, and A. Al-Harrasi. 2019. Silicon and Salinity: Crosstalk in Crop-Mediated Stress Tolerance Mechanisms. *Frontiers in Plant Science* 10(1429): 1-21.

Khosravinejad, F., R. Heydari, and T. Farboodnia. 2008. Effects of Salinity on Photosynthetic Pigments, Respiration, and Water Content in Two Barley Varieties. *Pakistan Journal of Biological Sciences* 11(20) : 2438-2442.

Khush, G.S., and P.S. Virk. 2005. *IR Varieties and Their Impact*. International Rice Research Institute. Filiphina, p 138.

Kotagiri, D. and V.C. Kolluru. 2017. Effect of Salinity Stress on The Morphology & Physiology of Five Different *Coleus* Species. *Biomedical and Pharmacology Journal* 10(4): 1639–1649.

Krishnamurthy, P., K. Ranathunge, S. Nayak, L. Schreiber, and M.K Mathew.

2011. Root Apoplastic Barriers Block Na+ Transport to Shoots in Rice (*Oryza sativa* L.). *Journal of Experimental Botany* 62(12) : 4215-4228.

Kristiono, A., R.D Purwaningrahayu, dan A. Taufiq. 2013. Respons Tanaman Kedelai, Kacang Tanah, dan Kacang Hijau Terhadap Cekaman Salinitas. *Buletin Palawija* 26 : 46-60.

Kumar, S., S.K. Dwivedi, S.S. Singh, S.K. Jha, S. Lekshmy, R. Elanchezhian, O.N. Singh, and B.P. Bhatt. 2014. Identification of Drought Tolerant Rice Genotypes by Analysing Drought Tolerance Indices and Morpho-Physiological Traits. *Sabrao Journal of Breeding and Genetics* 46(2) : 217-230.

Kumari, R., P. Kumar, V.K. Sharma, and H. Kumar. 2018. Evaluation of Salinity Tolerance of Rice Varieties Through In Vitro Seed Germination and Seedling Growth. *International Journal of Current Microbiology and Applied Sciences* (7): 2648–2659.

Lee, S. K., E.Y. Sohn, M. Hamayun, J.Y. Yoon, and I.J. Lee. 2010. Effect of Silicon on Growth and Salinity Stress of Soybean Plant Grown Under Hydroponic System. *Agroforestry Systems* 80(3): 333–340.

Li, Y., N. He, J. Hou, L. Xu, C. Liu, J. Zhang, Q. Wang, X. Zhang, and X. Wu. 2018. Factors Influencing Leaf Chlorophyll Content in Natural Forests at the Biome Scale. *Frontiers in Ecology and Evolution* 6(64) : 1-10.

Liu, B., P. Soundararajan, and A. Manivannan. 2019. Mechanisms of Silicon-Mediated Amelioration of Salt Stress in Plants. *Plants* 8(307): 1-13.

Lutts, S., V. Majerus, and J.M. Kinet. 1999. NaCl Effects On Proline Metabolism In Rice (*Oryza sativa*) Seedlings. *Physiologia Plantarum* 105: 450-458.

Lux, A., M. Luxová, J. Abe, and S. Morita. 2004. Root Cortex: Structural and Functional Variability and Responses to Environmental Stress. *Root Research* 13(3): 117-131.

Lux, A., Z. Lukačová, M. Vaculík, R. Švubová, J. Kohanová, M. Soukup, M. Martinka, and B. Bokor. 2020. Silicification of Root Tissues. *Plants* 9(111) : 1-20.

Machado, R. M. A. and R.P. Serralheiro. 2017. Soil Salinity: Effect on Vegetable Crop Growth. Management Practices To Prevent and Mitigate Soil Salinization. *Horticulturae* 3(30): 1-13.

Maiti, R., P. Satya, D. Rajkumar, and A. Ramaswamy. 2012. *Crop Plant Anatomy.* CPI Group. Croydon, p 28-29, 48-49.

Makarim, A.K, dan E. Suhartatik. 2009. *Morfologi dan Fisiologi Tanaman Padi.* Balai Besar Penelitian Tanaman Padi. Subang, hal 296-297.

Marafon, A. C. and L. Endres. 2013. Silicon: Fertilization and Nutrition in Higher Plants. *Amazon Journal of Agricultural and Environmental Sciences* 56(4): 380–388.

Mauad, M., C.A.C. Crusciol, A.S. Nascente, H.G. Filho, and G.P.P. Lima. 2016. Effects of Silicon and Drought Stress on Biochemical Characteristics of Leaves of Upland Rice Cultivars. *Revista Ciencia Agronomica* 47(3): 532–539.

Meena, V. D., M.L. Dotaniya, V. Coumar, S. Rajendiran, A. Ajay, S. Kundu, and A.S. Rao. 2014. A Case For Silicon Fertilization To Improve Crop Yields In Tropical Soils. *Proceedings of the National Academy of Sciences India Section B.Biological Sciences* 84(3): 505–518.

Morales, S. G., L.I. Trejo-Tellez, F.C.G. Merino, C. Caldana, D. Espinosa-Victoria, and B.E.H. Cabrera. 2012. Growth, Photosynthetic Activity, and Potassium and Sodium Concentration in Rice Plants Under Salt Stress. *Acta Scientiarum-Agronomy* 34(3): 317–324.

Muflikhah, N., B. Kurniasih and Tohari. 2018. Growth and Yield of Rice (*Oryza sativa* L.) under Raised- and Sunken-Bed System as Affected by Saline Irrigation in Baros, Bantul, Yogyakarta. *Ilmu Pertanian (Agricultural Science)* 3(2) : 110-116.

Mullan D., and J. Pietragalla. 2011. Leaf Relative Water Content, in A.Pask, J. Pietragalla, D. Mullan and M. Reynolds (eds). *Physiological Breeding II: A Field Guide to Wheat Phenotyping*. CIMMYT. Mexico, pp. 25-26.

Murillo-Amador, B., S. Yamada, T. Yamaguchi, E. Rueda-Puente, N. Avila-Serrano, J.L. Garcia-Hernandez, R. Lopez-Aguilar, E. Troyo-Dieguez, and A. Nieto-Garibay. 2007. Influence of Calcium Silicate on Growth, Physiological Parameters and Mineral Nutrition In Two Legume Species Under Salt Stress. *Journal of Agronomy and Crop Science* 193(6): 413–421.

Mvondo-She, M. A. and D. Marais. 2019. The Investigation of Silicon Localization and Accumulation In Citrus. *Plants* 8(7): 1-12.

Nisar, N., L. Li, S. Lu, N.C. Khin, and B.J. Pogson. 2015. Carotenoid Metabolism in Plants. *Molecular Plant* 8(1): 68–82.

Patil, A.A., A.G. Durgude, A.L. Pharande, A.D. Kadlag, and C.A. Nimbalkar. 2017. Effect of Calcium Silicate as A Silicon Source on Growth and Yield of Rice Plants. *International Journal of Chemical Studies* 5(6) : 545-549.

Phule, A.S., K.M. Barbadikar, M.S. Madhav, D. Subrahmanyam, P. Senguttuvel, M.B.B.P. Babu, and P. A. Kumar. 2019. Studies on Root Anatomy, Morphology and Physiology of Rice Grown Under Aerobic and Anaerobic Conditions. *Physiology and Molecular Biology of Plants* 25(1) : 197-205.

Prayoga, M.K., N. Rostini, M. R. Setiawati, T. Simarmata, S. Stoeber, dan K. Adinata. 2018. Preferensi Petani Terhadap Keragaman Padi (*Oryza sativa*) Unggul untuk Lahan Sawah di Wilayah Pangandaran dan Cilacap. *Jurnal Kultivasi* 17(1) : 523-530.

Purwono dan H. Purnamawati. 2007. *Budidaya 8 Jenis Tanaman Pangan Unggul*. Penebar Swadaya. Depok, hal 11.

Puvanitha, S., and S. Mahendran. 2017. Effect of Salinity on Plant Height, Shoot

and Root Dry Weight of Selected Rice Cultivars. *Scholars Journal of Agriculture and Veterinary Sciences* 4(4) : 126-131.

Polash, M. A. S., M.A. Sakil, M. Tahjib-Ul-Arif, and M.A. Hossain. 2018. Effect of Salinity on Osmolytes and Relative Water Content of Selected Rice Genotypes. *Tropical Plant Research* 5(2): 227–232.

Pontigo, S., A. Ribera., L. Gianfreda., M.L. Mora, M. Nikolic, and P. Cartes. 2015. Silicon In Vascular Plants: Uptake, Transport and Its Influence on Mineral Stress Under Acidic Conditions. *Planta* 242(1): 23–37.

Qados, A.M.S.A. 2011. Effect of Salt Stress on Plant Growth and Metabolism of Bean Plant *Vicia faba* (L.). *Journal of the Saudi Society of Agricultural Sciences* 10(1) : 7–15.

Rachman, A., A. Dariah, dan S. Sutono. 2018. *Pengelolaan Sawah Salin Berkadar Garam Tinggi.* IAARD Press. Jakarta, hal 13-14.

Rahneshan, Z., F. Nasibi, and A.A. Moghadam. 2018. Effects of Salinity Stress On Some Growth, Physiological, Biochemical Parameters and Nutrients In Two Pistachio (*Pistacia vera* L.) Rootstocks. *Journal of Plant Interactions* 13(1): 73-82.

Rao, G. B. and P. Susmitha. 2017. Silicon Uptake, Transportation and Accumulation in Rice. *Journal of Pharmacognosy and Phytochemistry* 6(6): 290–293.

Rawat, L., Y. Singh, N.Shukla, and J.Kumar. 2012. Seed Biopriming with Salinity Tolerant Isolates of *Trichoderma Harzianum* Alleviates Salt Stress in Rice: Growth, Physiological and Biochemical Characteristics. *Journal of Plant Pathology* 94(2): 353-365.

Reddy, I. N. B. L., B. Kim, I. Yoon, K. Kim, and T. Kwon. 2017. Salt Tolerance in Rice: Focus on Mechanisms and Approaches. *Rice Science* 24(3): 123–144.

Roidah, I.S. 2014. Pemanfaatan Lahan Dengan Menggunakan Sistem Hidroponik. *Jurnal Universitas Tulungagung Bonorowo* 1(2) : 43-50.

Sabatini, S.D., R. Budihastuti, dan S. W. A Suedy. 2017. Pengaruh Pemberian Pupuk Nanosilika terhadap Tinggi Tanaman dan Jumlah Anakan Padi Beras Merah (*Oryza sativa* L.var. *indica*). *Buletin Anatomi dan Fisiologi* 2(2) : 128-133.

Safitri, H., B.S. Purwoko, I.S. Dewi, and S.W. Ardie. 2017. Salinity Tolerance of Several Rice Genotypes At Seedling Stage. *Indonesian Journal of Agricultural Science* 18(2): 63-68.

Sahebi, M., M.M. Hanafi, A.S.N. Akmar, M.Y. Rafii, P. Azizi, F.F. Tengoua, J.N.M. Azwa, and M. Shabanimofrad. 2015. Importance of Silicon and Mechanisms of Biosilica Formation in Plants. *BioMed Research International* 2015: 1-17.

Saleh, J., N. Najafi, S. Oustan, K. Ghasemi-Golezani, and N. Aliasghrzad. 2019. Silicon Affects Rice Growth, Superoxide Dismutase Activity and

Concentrations of Chlorophyll and Proline under Different Levels and Sources of Soil Salinity. *Silicon* 11(6): 2659–2667.

Salsinha, Y.C.F., D. Indradewa, Y.A. Purwestri, and D. Rachmawati. 2020. Selection of Drought-Tolerant Local Rice Cultivars From East Nusa Tenggara, Indonesia During Vegetative Stage. *Biodiversitas* 21(1) : 170-178.

Sardhara, K., and K. Mehta. 2018. Effects of Abiotic and Biotic Stress on the Plant. *Academic Journal of Botanical Sciences* 1(1) : 5-9.

Senguttuvel, P., C. Vijayalakshmi, K. Thiyagarajan, R. Sritharan, S. Geetha, J.R. KannanBapu, and B.C. Viraktamath. 2013. Differential Response of Rice Seedlings to Salt Stress In Relation to Antioxidant Enzyme Activity and Membrane Stability Index. *Archives of Agronomy and Soil Science* 59(10): 1359–1371.

Sesanti, R.N. dan Sismanto. 2016. Pertumbuhan dan Hasil Pakchoi (*Brasicca rapa* L.) pada Dua Sistem Hidroponik dan Empat Jenis Nutrisi. *Jurnal Kelitbangan* 4(1) : 1-9.

Setiawati, T., A. Susilawati, A.Z. Mutaqin, M. Nurzaman, A. Annisa, R. Partasasmita, and K. Karyono. 2018. Morpho-anatomy and Physiology of Red Galangal (*Alpinia purpurata*) and White Galangal (*Alpinia galanga*) Under Some Salinity Stress Levels. *Biodiversitas* 19(3): 809-815.

Shahid, M.A., R.M. Balal, M. A. Pervez, T. Abbas, M. Ashfaq, U. Ghazanfar, M. Afzal, A. Rashid, F. Garcia-Sanchez, and N. S Mattson. 2012. Differential Response of Pea (*Pisum sativum* L.) Genotypes to Salt Stress in Relation to The Growth, Physiological Attributes Antioxidant Activity and Organic Solutes. *Australian Journal of Crop Science* 6(5): 828-838.

Shakeela, B.S., Q.I. Chachar, S.D. Chachar, A.B. Solangi, and J.A. Solangi. 2016. Effect of Salinity (NaCl) Stress on Physiological Characteristics of Rice (*Oryza Sativa* L.) at Early Seedling Stage. *International Journal of Agricultural Technology* 12(2) : 263-279.

Singh B, K.R. Reddy, E.D. Redona, and T. Walker. 2017. Screening of Rice Cultivars for Morpho-Physiological Responses to Early Season Soil Moisture Stress. *Rice Science* 24 (6): 322-335.

Subiksa, I.G.M. 2018. Pengaruh Pupuk Silika terhadap Pertumbuhan dan Hasil Tanaman Padi Sawah pada Inceptisols. *Jurnal Tanah dan Iklim* 42(2) : 153-160.

Sugiyanta, I.M Dharmika, dan D.S. Mulyani. 2018. Pemberian Pupuk Silika Cair untuk Meningkatkan Pertumbuhan, Hasil, dan Toleransi Kekeringan Padi Sawah. *Jurnal Agronomi Indonesia* 46(2) : 153-160.

Suhartini, T., dan T.Z. P. Harjosudarmo. 2017. Toleransi Plasma Nutfah Padi Lokal terhadap Salinitas. *Buletin Plasma Nutfah* 23(1) : 51-58.

Suharto, Y.B., H. Suhardiyanto, dan A.D Susila. 2016. Pengembangan Sistem Hidroponik untuk Budidaya Tanaman Kentang (*Solanum tuberosum* L.). *Jurnal Keteknikan Pertanian* 4(2) : 211-218.

Summart, J., P. Thanonkeo, S. Panichajakul, P. Prathepha, and M.T. McManus. 2010. Effect of Salt Stress on Growth, Inorganic Ion and Proline Accumulation In Thai Aromatic Rice, Khao Dawk Mali 105, Callus Culture. *African Journal of Biotechnology* 9(2): 145-152

Suprihatno, B., A.A Daradjat, Satoto, S.E Baehaki, I.N Widiarta, A. Setyono, S.D Indrasari, O.S Lesmana, dan H. Sembiring. 2009. *Deskripsi Varietas Padi*. Balai Besar Penelitian Tanaman Padi. Subang, hal 5.

Sutikno. 2006. Mikroteknik Tumbuhan. Laboratorium Mikroteknik dan Embriologi Tumbuhan Fakultas Biologi UGM. Universitas Gadjah Mada. Yogyakarta.

Swapna, S., and K.S. Shylaraj. 2017. Screening for Osmotic Stress Responses in Rice Varieties under Drought Condition. *Rice Science* 24(5) : 253-263.

Syakir, M., N. Maslahah, dan M. Januwati. 2008. Pengaruh Salinitas Terhadap Pertumbuhan, Produksi, dan Mutu Sambiloto. *Buletin Penelitian Tanaman Rempah dan Obat* 19(2): 129-137.

Taibi, K., F. Taibi, L.A. Abderrahim, A. Ennajah, M. Belkhodja, and J.M. Mulet. 2016. Effect of Salt Stress on Growth, Chlorophyll Content, Lipid Peroxidation and Antioxidant Defence Systems in *Phaseolus vulgaris* L. *South African Journal of Botany* 105 : 306-312.

Tampoma, W. P., T. Nurmala, dan M. Rachmadi. 2017. Pengaruh Dosis Silika Terhadap Karakter Fisiologı dan Hasil Tanaman Padi (*Oryza sativa* L.) Kultivar Lokal Poso (kultıvar 36-Super dan Tagolu). *Jurnal Kultivasi* 16(2): 320–325.

Tuna, A.L., C. Kaya, D. Higgs, B. Murillo-Amador, S. Aydemir, and A.R. Girgin. 2008. Silicon Improves Salinity Tolerance In Wheat Plants. *Environmental and Experimental Botany* 62: 10-16.

Utama, M.Z.H. 2015. *Budidaya Padi pada Lahan Marjinal Kiat Meningkatkan Produksi Padi*. Penerbit Andi. Yogyakarta, hal 71-72.

Wu, G., H. Liu, R. Feng, C. Wang, and Y. Du. 2017. Silicon Ameliorates the Adverse Effects of Salt Stress On Sainfoin (*Onobrychis viciaefolia*) Seedlings. *Plant, Soil and Environment* 63(12): 545-551.

Yang, Z., J. Li, L. Liu, Q. Xie, and N. Sui. 2020. Photosynthetic Regulation Under Salt Stress and Salt-Tolerance Mechanism of Sweet Sorghum. *Frontiers in Plant Science* 10(1722) : 1-12.

Yunanda, A.P., A.R Fauzi, dan A. Junaedi. 2013. Pertumbuhan dan Produksi Padi Varietas Jatiluhur dan IR64 pada Sistem Budidaya Gogo dan Sawah. *Buletin Agrohorti* 1(4) : 18-25.

Yoshida, S., D.A. Forno, J.H Cock, and K. A. Gomez. 1976. *Laboratory Manual for Physiological Studies of Rice 3rd edition*. The International Rice Research Institute. Manila, p 62.

Zagoto, A.D.P., and V. Violita. 2019. Leaf Anatomical Modification in Drought of

Rice Varieties (*Oryza sativa* L.). *Eksakta :Berkala Ilmiah Bidang MIPA* 20 (2) : 42-52.

Zhu, Y. and H. Gong. 2014. Beneficial Effects of Silicon on Salt and Drought Tolerance In Plants. *Agronomy for Sustainable Development* 34(2): 455–472.