

## DAFTAR PUSTAKA

- Abbasdokht, H. 2011. The effect of hydropriming and halopriming on germination and early growth stage of wheat (*Triticum aestivum* L.). *Desert*. 16: 61-68.
- Abdelaziz, M.N., T.D. Xuan., A.M.M. Mekawy., H. Wang., and T.D. Khanh. 2018. Relationship of Salinity Tolerance to Na<sup>+</sup> Exclusion, Proline Accumulation, and Antioxidant Enzyme Activity in Rice Seedlings. *Agriculture*. 8 (166): 1-12.
- Abdelhamid, M.T., El-Masry, R.R., Saleh, D.D., Mazhar, M.F., Ragab, R., Oba, S., Sabagh A. E., El-Kholy, M.E., and Omer, E. 2019. *Priming and Pretreatment of Seeds and Seedlings (Chapter: Mechanisms of Seed Priming Involved in Salt Stress Amelioration)*. Springer Singapore. pp. 219-251.
- Abid, M., Zhang, Y.J., Li, Z., Bai, D.F., Zhong, Y.P., and Fang, J.B. 2020. Effect of Salt stress on growth, physiological and biochemical characters of Four kiwi fruit genotypes. *Scientia Horticulturae*. 271: 1-12.
- Abid, M., Hakeem, A., Shao, Y., Liu, Y., Zahoor, R., Fan, Y., Suyu, J., Ata-Ul-Karim, S., Tian, Z., Jiang, D., Snider, J., and Dai, T. 2017. Seed osmopriming invokes stress memory against post-germinative drought stress in wheat (*Triticum aestivum* L.). *Environmental and Experimental Botany*. 145. 12-20.
- Ahmad, P., M. M. Azooz, and M. N. V. Prasad. 2013. *Ecophysiology and Responses of Plants Under Salt Stress*. Springer. New York. p. 16.
- Ahmed, S., Ahmed, S., Roy, S., Woo, S., Sonawane, K., and Shohael, A. 2019. Effect of salinity on the morphological, physiological and biochemical properties of lettuce (*Lactuca sativa* L.) in Bangladesh. *Open Agriculture*. 4. 361-373.
- Allewa, K., Chara, O., and Amodeo, G. 2012. Aquaporins: Another piece in the osmotic puzzle. *FEBS Letters*. 586. 2991-2999.

- Aloui, H., Souguir, M., Latique, S., and Hannachi, C. 2014. Germination and Growth in Control and Primed Seeds of Pepper as Affected by Salt Stress. *Cercetări Agronomice în Moldova*. 47(3): 83-95.
- Alzahrani, S. M., Alaraidh, I. A., Migdadi, H., Alghamdi, S., Altaf, K.M., and Ahmad, P. 2019. Physiological, biochemical, and antioxidant properties of two genotypes of *Vicia faba* grown under salinity stress. *Pakistan Journal of Botany*. 51: 786–798.
- An, P., Inanaga, S., Li, X., Shimizu, H., and Tanimoto, E. 2003. Root characteristics in salt tolerance. *Root Research*. 12: 125-132.
- Arif, M. R., Islam, M. T., and Robin, A. 2019. Salinity Stress Alters Root Morphology and Root Hair Traits in *Brassica napus*. *Plants (Basel, Switzerland)*: 8(7): 1-14.
- Arif, M., Jan, M., Marwat, K.B., and Khan, M.A. 2008. Seed Priming Improves Emergence and Yield of Soybean. *Canadian Journal of Botany*. 40(3): 1169-1177.
- Arif, M., Tariq Jan, M., Khan, N. U., Khan, A., Khan, M.J., and Munir, I. 2010. Effect of Seed Priming on Growth Parameters of Soybean. *Pakistan Journal of Botany*. 43(4): 2803-2812.
- 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.
- Asada, K. 1999. The water-water cycle in chloroplasts: scavenging of active oxygens and dissipation of excess photons. *Annual Review of Plant Biology*. 50: 601-639.
- Ashraf, M., M. Ozturk, and H. R. Athar. 2009. *Salinity and Water Stress : Improving Crop Efficiency*. Springer. Netherlands. p. 3.
- Assaha, D., Ueda, A., Saneoka, H., Al-Yahyai, R., & Yaish, M. W. 2017. The Role of Na<sup>+</sup> and K<sup>+</sup> Transporters in Salt Stress Adaptation in Glycophytes. *Frontiers in Physiology*. 8(509): 1-19.

- Atabayeva, S., A. Nurmahanova, S. Minocha, A. Ahmetova, S. Kenzhebayeva, S. Aidosova, A. Nurzhanova, A. Zhardamaieva, 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.
- Bala, V. C., Avid, M., Kumar, P., and Sangam. 2019. A Review on *Amaranthus tricolor* as A Traditional Medicinal Plant. *World Journal of Pharmaceutical Research*. 8(11): 226-237.
- 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.
- Bhusnure, O.G., Kazi, P.A., Gholve, S.B., Ansari, M.M., Kazi, S.N. 2014. Solid dispersion: an evergreen method for solubility enhancement of poorly water-soluble drugs. *International journal of research in pharmacy and chemistry*. 4(4): 906-918.
- Battaglia, M and Covarrubias, A.A. 2014. Late Embryogenesis Abundant (LEA) proteins in legumes. *Frontiers in Plant Science*. 4(190): 1-11.
- 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.
- 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.
- Boughalleb, F., Abdellaoui, R., Nbiba, N., Mahmoudi, M., and Neffati, M. 2017. Effect of NaCl stress on physiological, antioxidant enzymes and anatomical responses of *Astragalus gombiformis*. *Biologia*. 72(12): 1454-1466.
- Boughalleb, F., Denden, M., & Tiba, B. 2009. Anatomical changes induced by increasing NaCl salinity in three fodder shrubs, *Nitraria retusa*, *Atriplex*

- halimus* and *Medicago arborea*. *Acta Physiologiae Plantarum*. 31: 947-960.
- BPS. 2017. Statistik Tanaman Sayuran dan Buah-Buahan Semusim Indonesia. Badan Pusat Statistik. <http://www.bps.go.id>. Diakses 02 Januari 2022.
- Byrt, C.S., R. Munns, R.A. Burton, M. Gilliam, and S. Wege. 2018. Root Cell Wall Solutions for Crop Plants in Saline Soils. *Plant Science*. 269: 47-55.
- C. Cabot, J. V. Sibole, J. Barcelo, and C. Poschenrieder. 2009. Absciscic acid decreases leaf Na<sup>+</sup> exclusion in salt treated *Phaseolus vulgaris* L. *Journal of Plant Growth Regulation*. 28(2): 187-192.
- Cai, X., Ge, C., Xu, C., Wang, X., Wang, S., and Wang, Q. 2018. Expression Analysis of Oxalate Metabolic Pathway Genes Reveals Oxalate Regulation Patterns in Spinach. *Molecules (Basel, Switzerland)*. 23(6): 1286.
- Chaudhry, A. H., Nayab, S., Hussain, S. B., Ali, M., and Pan, Z. 2021. Current Understandings on Magnesium Deficiency and Future Outlooks for Sustainable Agriculture. *International journal of molecular sciences*, 22(4): 1-18.
- Chen, K. and R. Arora. 2011. Dynamics of the antioxidant system during seed osmopriming, post-priming germination, and seedling establishment in spinach (*Spinacia oleracea*). *Plant science : an international journal of experimental plant biology*. 180: 212-220.
- Chen, X., Zhang, R., Xing, Y., Jiang, B., Li, B., Xu, X., and Zhou, Y. 2021. The efficacy of different seed priming agents for promoting sorghum germination under salt stress. *PLoS ONE*. 16(1): 1-14.
- Corbineau, F. dan Come, D. 2006. Priming: a Technique for Improving Seed Quality. *Seed Testing International*. 132: 38-40.
- Das, K and Roychoudhury, A. 2014. Reactive oxygen species (ROS) and response of antioxidants as ROS-scavengers during environmental stress in plants. *Frontiers in Environmental Science*. 2(53): 1-13.

- Debbarma, M. and S.P. Das. 2017. Priming of seed: Enhancing growth and development. *International Journal of Current Microbiology and Applied Sciences*. 6(12): 2390-2396.
- Elkoca, E., Kamil, H., Ahmet, E., and Sezai, E. 2007. Hydro and osmoprimer improve chickpea germination. *Soil and Plant Science*. 57(3): 193-200.
- Ernita, E dan Mairizki, F. 2019. Penggunaan Polietilen Glikol Sebagai Teknik Invigorasi Untuk Memperbaiki Viabilitas, Vigor, dan Produksi Benih Kedelai. *Jurnal Ilmiah Pertanian*. 16(1): 8-18.
- Estiasih, T., W.D.R. Putri dan E. Waziroh. 2017. *Umbi-umbian dan Pengolahannya*. UB Press. Malang. Hal 95.
- Faijunnahar, M., Abdullahil, B., Md. Ahsan Habib., and H. M. M. Tariq Hossain. 2017. Polyethylene Glycol (PEG) Induced Changes in Germination, Seedling Growth and Water Relation Behavior of Wheat (*Triticum aestivum* L.) Genotypes. *Universal Journal of Plant Science*. 5(4): 49-57.
- Fang, S., Hou, X., and Liang, X. 2021. Response Mechanisms of Plants Under Saline-Alkali Stress. *Frontiers in plant science*. 12 (667458): 1-20.
- Farooq, M., Basra, S., Tabassum, M. A. R., and Afzal, I. 2006. Enhancing the performance of direct seeded fine rice by seed priming. *Plant Production Science*. 9(4): 446-456.
- Farooq, M., Usman, M., and Nadeem, F. 2019. Seed priming in field crops: potential benefits, adoption and challenges. *Crop and Pasture Science*. 70: 731-771.
- Fitriani H., Nurlailah, dan D. Rakhimna. 2016. Kandungan asam oksalat sayur bayam. *Medical Laboratory Technology Journal*. 2(2): 51-55.
- Franchesi, V.R., and Nakata, P.A. 2005. Calcium oxalate in plants: formation and functions. *Annual Review of Plant Biology*. 56: 41-71.
- Frans J. M. Maathuis. 2014. Sodium in plants: perception, signaling, and regulation of sodium fluxes. *Journal of Experimental Botany*. 65(3): 849-858.

- Ghiyasi, M. and Tajbakhsh, M. 2013. Osmopriming Alleviates Drought Stress in Soybean (*Glycine max* L.) Seeds during Germination and Early Growth Stages. *Journal of Applied Biological Sciences*. 7(1): 27-32.
- Groß, F., J. Durner., and F. Gaupels. 2013. Nitric oxide, antioxidants and prooxidants in plant defense responses. *Frontiers in Plant Science*. 4(5): 419-425.
- Grubben, G. J. H. 2004. *Plant Resources of Tropical Africa 2: Vegetables*. PROTA Foundation. Wageningen. pp.85-88.
- Gupta, B., and Huang, B. 2014. Mechanism of salinity tolerance in plants: Physiological, biochemical, and molecular characterization. *International Journal of Genomics*. 1-14.
- Gurmani, A. R., Bano, A, Khan, S.U., Din, J and Zhang, J.L. 2011. Alleviation of salt stress by seed treatment with abscisic acid (ABA), 6-benzylaminopurine (BA) and chlormequat chloride (CCC) optimizes ion and organic matter accumulation and increases yield of rice (*Oryza sativa* L.). *Australian Journal of Crop Science*. 5(10): 1278-1285.
- Harborne, J.B. 1987. *Metode Fitokimia: Penuntun Cara Modern Menganalisis Tumbuhan*, Cetakan ke-2. (Terjemahan K. Padmawinata dan I. Soediro). Bandung: ITB Press.
- Harijati, N., E. L. Arumingtyas dan R. Handayani. 2011. Pengaruh pemberian kalsium terhadap ukuran dan kerapatan kristal kalsium oksalat pada porang (*Amorophallus muelleri* Blume). *Jurnal Pembangunan dan Alam Lestari*. 1: 72-139.
- Haryadi, S.S dan S. Yahya. 1988. *Fisiologi Stres Lingkungan*. Bogor: PAU Biotek IPB.
- Hasan, R. and H. Miyake. 2017. Salinity Stress Alters Nutrient Uptake and Causes the Damage of Root and Leaf Anatomy in Maize. *International Conference on Biological Science*. 219-225.
- Hasanuzzaman, M., Parvin, K., Anee, T. I. , Masud, A. A. C. , & Nowroz, F. 2022. Salt Stress Responses and Tolerance in Soybean. In M.

- Hasanuzzaman, & K. Nahar (Eds.), Plant Stress Physiology-Perspectives in Agriculture. *IntechOpen*. pp 1-37.
- Hasanuzzaman, M., Bhuyan, M.H.M.B., Nahar, K., Hossain, M.S., Mahmud, J.A., Hossen, M.S., Masud, A.A.C., Moumita., and Fujita, M. 2018. Potassium: A Vital Regulator of Plant Responses and Tolerance to Abiotic Stresses. *Agronomy*. 8(31): 1-29.
- Helsinta, N., Halim, A., Octavia, M.D., and Rivai, H. 2021. Review: Solid Dispersion of Fenofibrate Using Poly Ethylene Glycol 6000. *International Journal of Pharmaceutical Sciences and Medicine*. 6(6): 42-51.
- Hendriyani, I.S dan N. Setiari. 2009. Kandungan Klorofil dan Pertumbuhan Kacang Panjang (*Vigna sinensis*) Pada Tingkat Penyediaan Air yang Berbeda. *Jurnal Sains dan Matematika*. 17(3): 145-150.
- Hniličková, H., Hnilička, F., Orsák M., and Hejnák V. 2019: Effect of salt stress on growth, electrolyte leakage, Na<sup>+</sup> and K<sup>+</sup> content in selected plant species. *Plant Soil Environment*. 65(2): 90-96.
- Hoang, H. Ly., Guzman, C., Cadiz, N., and Dang, H. Tran. 2019. Physiological and phytochemical responses of red amaranth (*Amaranthus tricolor* L.) and green amaranth (*Amaranthus dubius* L.) to different salinity levels. *Agricultural Research Communication Centre*. 2(9): 1-7.
- Hussian, I., Ahmad, R., Farooq, M., Rehman, A., Amin, M., and Abu Bakar, M. 2014. Seed Priming: A Tool To Invigorate The Seeds. *Scientia Agriculturae*. 7(3): 122-128.
- 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.
- Irakoze, W., H. Prodjinto, S. Nijimbere, G. Rufyikiri, and S. Lutts. 2020. NaCl and Na<sub>2</sub>SO<sub>4</sub> Salinities Have Different Impact on Photosynthesis and Yield-Related Parameters in Rice (*Oryza sativa* L.). *Agronomy* 10(864): 1-12.



- Isayenkov, S. V., and Maathuis, F. 2019. Plant Salinity Stress: Many Unanswered Questions Remain. *Frontiers in plant science*. 10:80.
- ITIS. 2011. *Amaranthus tricolor* L. [https://www.itis.gov/servlet/SingleRpt/SingleRpt?search\\_topic=TSN&search\\_value=181927#null](https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=181927#null). Diakses 8 April 2021.
- J.-K. Zhu. 2003. Regulation of ion homeostasis under salt stress. *Plant Biology*. 6(5): 441-445.
- Javelle, M., V. Vernoud, P. M. Rogowsky and G. C. Ingram. 2010. Epidermis: The Formation and Functions of a Fundamental Plant Tissue. *New Phytologist*. 2011(189): 17-39.
- Jisha, K.C., Vijayakumari, K. and JosPuthur, T. 2013. Seed priming for abiotic stress tolerance: an overview. *Acta Physiologiae Plantarum*. 35: 1381-1396.
- Junandi., Mukarlina., dan Linda, R. 2019. Pengaruh Cekaman Salinitas Garam NaCl Terhadap Pertumbuhan Kacang Tunggak (*Vigna unguiculata* L. Walp) Pada Tanah Gambut. *Jurnal Protobiont*. 8(3): 101-105.
- Karolinoerita, V dan Yusuf, W. A. 2020. Salinisasi Lahan dan Permasalahannya di Indonesia. *Jurnal Sumberdaya Lahan*. 14(2): 91-99.
- Kaur, S., Gupta, A. K., and Kaur, N. 2005. Seed Priming Increase Crop Yield Possibly by Modulating Enzymes of Sucrose Metabolism in Chickpea. *Journal of Agronomy and Crop Science*. 191: 81-87.
- Khan, A.A. 1992. Preplant Physiological Seed Conditioning. *Horticultural Review*. 13: 131-181.
- Khan, A.H., Singh, A.K., Maurya, K.N., and Yadava, R.K. 2015. Effect of Different Seed Priming Treatments on Germination, Growth, Biochemical Changes and Yield of Wheat Varieties under Sodic Soil. *International Journal of Science and Research*. 306-310.
- Kotagiri, D and Kolluru, V. C. 2017. Effect of Salinity Stress on the Morphology and Physiology of Five Different Coleus Species. *Biomedical and Pharmacology Journal*. 10(4): 1639-1649.



- Kristiono, A., Purwaningrahayu, R.D., dan Taufiq, A. 2013. Respons tanaman kedelai, kacang tanah, dan kacang hijau terhadap cekaman salinitas. *Buletin Palawija*. 45-60.
- Kubala, S., Garneczarska, M., Wojtyla, L., Clippe, A., Kosmala, A., Żmieńko, A. & Quinet, M. 2015. Deciphering priming-induced improvement of rapeseed (*Brassica napus* L.) germination through an integrated transcriptomic and proteomic approach. *Plant Science*. 231: 94-113.
- Kusmiyati F., Sumarsono, dan Karno. 2014. Pengaruh Perbaikan Tanah Salin Terhadap Karakter Fisiologis *Calopogonium mucunoides*. *Pastura*. 4(1): 1-6.
- Kuswanto, H. 1996. *Dasar-dasar Teknologi, Produksi dan Sertifikasi Benih*. Yogyakarta: Andi Offset.
- Latifa, A dan Rachmawati, D. 2020. Pengaruh *Osmopriming* Benih Terhadap Pertumbuhan dan Morfofisiologi Tanaman Kangkung Darat (*Ipomoea reptans* Poir) Pada Cekaman Kekeringan. *Jurnal Agronomi Indonesia*. 48(2): 165-172.
- Lei, C., Bagavathiannan, M., Wang, H., Sharpe, S., Meng, W., Yu, J. 2021. Osmopriming with Polyethylene Glycol (PEG) for Abiotic Stress Tolerance in Germinating Crop Seeds: A Review. *Agronomy*. 11. 2194. 1-12.
- Lu, Q., Yang, L., Wang, H., Yuan, J., and Fu, X. Calcium Ion Richness in *Cornus hongkongensis* subsp. *elegans* (W. P. Fang et Y. T. Hsieh) Q. Y. Xiang Could Enhance Its Salinity Tolerance. 2021. *Forests*. 12: 1-17.
- Maiti, R., P. Satya, D. Rajkumar, and A. Ramaswamy. 2012. *Crop Plant Anatomy*. CPI group. Croydon, p 28-29, 48-49.
- Makbul, S., Saruhan Güler, N., Durmus, N., and Güven, S. 2011. Changes in anatomical and physiological parameters of soybean under drought stress. *Turkish Journal of Botany*. 35. 1-10.
- Maksimov, I.V., Surina, O.B., Sakhabutdinova, A.R., Troshina, N.B., and Shakirova, F. M. 2004. Changes in the phytohormone levels in wheat calli

- as affected by salicylic acid and infection with *Tilletia caries*, a bunt pathogenic agent. *Plant Physiology*. 51: 228-233.
- Mane A.V., Karadge B.A. and Samant J.S. 2010. Salinity induced changes in photosynthetic pigments and polyphenols of *Cymbopogon Nardus* (L.) Rendle. *Journal of Chemical and Pharmaceutical Research*. 2: 338-347.
- Menezes, R. V., Azevedo Neto, A. D. D., Ribeiro, M. D. O., and Cova, A. M. W. 2017. Growth and contents of organic and inorganic solutes in amaranth under salt stress. *Pesqui. Agropecuária Trop*. 47: 22-30.
- Mindari, W., Maroeto, dan Syekhfani. 2011. Maize Tolerance to Salinity of Irrigation Water. *Journal Tropical Soil*. 16(3): 211-218.
- Miransari, M. and Smith, D.L. 2014. Plant Hormones and Seed Germination. *Environmental and Experimental Botany*. 99: 110-121.
- Miranti, I.P. 2022. Pertumbuhan dan Tanggapan Anatomis Akar Tanaman Cabai Keriting (*Capsicum annuum* L.) Terhadap Cekaman NaCl Rendah pada Awal Fase Vegetatif. *Stigma*. 15(1): 28-37.
- Mirmazloum, I., Kiss, A., Erdélyi, É., Ladányi, M., Németh, É., Z, Radácsi., and Péter. 2020. The Effect of Osmopriming on Seed Germination and Early Seedling Characteristics of *Carum carvi* L. *Agriculture*. 10(2): 94-103.
- 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.
- Nakata, Paul. 2012. Plant calcium oxalate crystal formation, function, and its impact on human health. *Frontiers in Biology*. 7: 254-266.
- Nasrun., Hasfita, F., dan Rizal, M. 2014. Studi Pemanfaatan Kulit Pisang Kepok (*Musa parasidiaca*) Sebagai Bahan Baku Pembuatan Asam Oksalat. *Jurnal Teknologi Kimia Unimal*. 3(2): 33-40.

- Nxele, X., Klein, A., and Ndimba, B.K. 2017. Drought and salinity stress alters ROS accumulation, water retention, and osmolyte content in sorghum plants. *South African Journal of Botany*. 108. 261-266.
- Pallaoro., Dryelle, S., Camili., Elisangela, C., Guimarães., Sebastião, C., Albuquerque., and Maria Cristina de Figueiredo. 2016. Methods for priming maize seeds. *Journal of Seed Science*. 38(2): 148-154.
- Pospíšil, Pavel. 2016. Production of Reactive Oxygen Species by Photosystem II as a Response to Light and Temperature Stress. *Frontiers in Plant Science*. 7. 1-11.
- Purwaningrahyu, Runik D., dan Taufiq, Abdullah. 2017. Respon Morfologi Empat Genotip Kedelai terhadap Cekaman Salinitas. *Jurnal Biologi Indonesia*. 13(2): 175-188.
- 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.
- Qados, Amira. 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. 7-15.
- Rachma, T. N. S., Damanhuri., dan Saptadi, D. 2016. Viabilitas dan vigor benih kakao (*Theobroma cacao* L.) pada beberapa jenis media invigorasi. *Journal of Agricultural Science*. 1(2): 72-80.
- Rachman, A. IGM., Subiksa dan Wahyunto. 2007. Perluasan Areal Tanaman Kedelai ke lahan suboptimal. Dalam Sumarno, Suyamto, A.Widjono, Hermanto & H.Kasim (Eds.) *Kedelai: Teknik Produksi dan Pengembangan*. Badan Penelitian dan Pengembangan Pertanian. Pusat Penelitian Tanaman Pangan. pp 185-204.
- Rahneshan, Z., Nasibi, F., and Moghadam, A. 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. 73-82.

- Raj, A.B and S.K. Raj. 2019. Seed priming: An approach towards agricultural sustainability. *Journal of Applied and Natural Science*. 11: 227-234.
- Rao, K.V.M., A.S. Raghavendra, K.J. Reddy. 2019. *Physiology and Molecular Biology of Stress Tolerance in Plants*. Springer, Netherlands, NL.
- Rehman, A., Nadeem, F and Farooq, M. 2021. *The Root Systems in Sustainable Agricultural Intensification*. 1<sup>st</sup> Edition. Chapter: Role of Seed Priming in Root Development and Crop Production. John Wiley & Sons Ltd. pp 221-225.
- Rhoades, J. D., F. Chanduvi, dan S. Lesch. 1999. *Soil Salinity Assessment: Methods and Interpretation of Electrical Conductivity Measurements*. FAO United Nations. Roma. pp. 5-6.
- Rianto, D., dan Ahmad, N. 2017. Optimalisasi Kandungan Serat pada Saus Bayam. *Jurnal Ilmiah Teknologi Pertanian*. 2(2): 227-231.
- Rizki, F. 2013. *The Miracle of Vegetable*. PT AgroMedia Pustaka. Jakarta. Hal. 16-18.
- Rosawanti, P., Ghulamahdi, M., dan Khumaida, N. 2016. Respon Anatomi dan Fisiologi Akar Kedelai terhadap Cekaman Kekeringan. *Jurnal Agronomi Indonesia*. 43(3): 186-192.
- Rukmana, H. R. 1994. *Bayam Pertanaman dan Pengolahan Pascapanen*. Penerbit Kanisius. Yogyakarta. Hal. 18-20.
- Rusmin, D., Suwarno, F.C., Darwati, I., dan Ilyas, S. 2014. Pengaruh Suhu dan Media Perkecambahan terhadap Viabilitas dan Vigor Benih Purwoceng untuk Menentukan Metode Pengujian Benih. *Buletin Penelitian Tanaman Rempah dan Obat*. 25(1): 45-52.
- Sadeghi, H., Khazaei, F., Yari, L., and Sheidaei, S. 2011. Effect of seed osmoprimer on seed germination behaviour and vigour of soybean (*Glycine max* L.). *Journal of Agricultural and Biological Science*, 6(1): 39-43.

- Schleiff, U and Muscolo, A. 2009. Fresh look at plant salt tolerance as affected by dynamics. *The European Journal of Plant Science and Biotechnology*. 5(2): 27-32.
- Serrano, R., Culianz-Macia, F. A., and Moreno, V. 1999. Genetic engineering of salt and drought tolerance with yeast regulatory genes. *Scientia Horticulturae*. 78: 261-269.
- Sezgin, M. and Kahya, M. 2018. Phytohormones. *Journal of Science and Technology* 8(1): 35-39.
- Shafi, M., Bakht, J., Khan, M.J, and Khan, M.A. 2010. Effect of salinity and ion accumulation of wheat genotypes. *Pakistan Journal of Botany*. 42: 4113-4121.
- Sharma, P and Dubey R.S. 2005. Modulation of nitrate reductase activity in rice seedlings under aluminium toxicity and water stress, role of osmolytes as enzyme protectant. *Journal of Plant Physiology*. 162: 854-864.
- Singh, A., R. Dahiru, M. Musa, B.S. Haliru. 2014. Effect of osmopriming duration on germination, emergence, and early growth of cowpea (*Vigna unguiculata* L.) in the Sudan savanna of Nigeria. *International Journal of Agronomy*. 1-4.
- Singh, A.K. and Dubey R.S. 1995. Changes in chlorophyll a and b contents and activities of photosystems 1 and 2 in rice seedlings induced by NaCl. *Photosynthetica*. 31: 489-499.
- Sipayung, R. 2003. Stress Garam dan Mekanisme Toleransi Tumbuhan. <https://repository.usu.ac.id/bitstream/handle/123456789/793/bdp-rosita2.pdf?sequence=2&isAllowed=y>. Diakses pada 28 April 2022.
- Srivastava, L. M. 2010. *Plant Growth and Development*. USA: Academic Press. pp 341-379.
- Sutikno. 2006. Mikroteknik Tumbuhan. Laboratorium Mikroteknik dan Embriologi Tumbuhan Fakultas Biologi UGM. Universitas Gadjah Mada. Yogyakarta.

- Sutrian, Y. 2011. *Pengantar Anatomi Tumbuh-Tumbuhan (Tentang Sel dan Jaringan)*. Jakarta: Rineka Cipta.
- Syaiful, S.A. 2014. Seed Priming with PEG 8000 for Improving Drought Stress Tolerance of Soybean (*Glycine max*). *International Journal of Agriculture Systems (IJAS)*. 2(1): 19-26.
- Taini., Zulfa, F., Rahmad, S., and Ahmad, Z. 2019. Pemanfaatan Alat Pengusangan Cepat Menggunakan Etanol Untuk Pendugaan Vigor Daya Simpan Benih Jagung (*Zea Mays* L.). *Buletin Agrohorti*. 7(2): 230-237.
- Tanoi, K and Kobayashi, N. 2015. Leaf Senescence by Magnesium Deficiency. *Plants*. 4: 756-772.
- Tooulakou, G., A. Giannopoulos., D. Nikolopoulos., P. Bresta., E. Dotsika., M. G. Orkoula., C. G. Kontoyannis., C. Fasseas., G. Liakopoulos., M. I. Klapa., and G. Karabourniotis. 2016. Alarm photosynthesis: Calcium Oxalate crystals as an internal CO<sub>2</sub> source in plants. *Plant Physiology*. 171: 2577-2585.
- Trisnawaty, A. R., R. Asra., N.J. Panga., and R. Sjahril. 2021. Effect of Osmopriming with Polyethylene Glycol 6000 (PEG-6000) on Rice Seed (*Oryza sativa* L.) Germination and Seedling Growth Under Drought Stress. *International Journal of Agriculture System*. 9(1): 40-50.
- Tsai, J., J. Huang, T. T. Wu, and Y. H. Lee. 2005. Comparison of Oxalate content in foods and beverages in Taiwan. *JTUA*. 16(3): 93-98 .
- Turhan, A., Kuscu, H., Ozmen, N., Serbeci, M., Demir, A. 2014. Effect of different concentrations of diluted seawater on yield and quality of lettuce. *Chilean journal of agricultural research*. 74: 111-116.
- Uddin, S and Nafees, M. 2021. Effect of seed priming on growth and performance of *Vigna radiata* L. under induced drought stress. *Journal of Agriculture and Food Research*. 4: 1-8.
- Wang, X., Geng, S., Ri, Y.-J., Cao, D., Liu, J., Shi, D., Yang, C. 2011. Physiological responses and adaptive strategies of tomato plants to salt and alkali stresses. *Scientia Horticulturae*. 130: 248-255.

- Wang, Y., Li, K., and Li, X. 2009. Auxin redistribution modulates plastic development of root system architecture under salt stress in *Arabidopsis thaliana*. *Journal of Plant Physiology*. 166: 1637-1645.
- Wani, S. H. 2018. *Biochemical, Physiological, and Molecular Avenues For Combating Abiotic Stress In Plants*. Elseiver. Oxford. pp. 224-225.
- Ware, H. A., Sparks, S., Addison, B., Kalluri, U. 2021. Importance of suberin biopolymer in plant function, contributions to soil organic carbon and in the production of bio-derived energy and materials. *Biotechnology for Biofuels*. 14(75): 1-21.
- Wirawan, B.D.S., Putra, E.T.S., dan Yudono, P. 2016. Pengaruh Pemberian Magnesium, Boron dan Silikon terhadap Aktivitas Fisiologis, Kekuatan Struktural Jaringan Buah dan Hasil Pisang (*Musa acuminata*) “Raja Bulu”. *Vegetalika*. 5(4): 1-14.
- Wolny, E., Betekhtin, A., Rojek, M., Braszewska-Zalewska, A., Lusinska, J., and Hasterok, R. 2018. Germination and the Early Stages of Seedling Development in *Brachypodium distachyon*. *International journal of molecular sciences*. 19(10): 36.
- Wulandari, Y., Triadiati, T., Sulistyaningsih, Y., Suprayogi, A., and Rahminiwati, M. 2021. Salinity stress affects growth and physiology of mulberry (*Morus* sp.). *IOP Conference Series: Earth and Environmental Science*. 948. 012049. 1-11.
- Xu, H. W., Ji, X. M., He, Z. H., Shi, W. P., Zhu, G. H., Niu, J. K., Li, B. S., & Peng, X. X. 2006. Oxalate accumulation and regulation is independent of glycolate oxidase in rice leaves. *Journal of experimental botany*. 57(9): 1899-1908.
- Yadav, S., Mohammad, I., Aqi, A. and Shamsul, H. 2011. Causes of salinity and plant manifestations to salt stress: a review. *Journal Environmental Biology*. 32: 667-685.



- Yildiz, M., Poyraz, I., Caudar, A., Ozgen, Y., and Beyaz, R. 2020. Plant Breeding: Current and Future Views. Chapter: Plant Response to Salt Stress. *IntechOpen*, 2021. pp 1-19.
- Zhang, F., Yu, J., Johnston, C. R., Wang, Y., Zhu, K., Lu, F., Zhang, Z., and Zou, J. 2015. Seed Priming with Polyethylene Glycol Induces Physiological Changes in Sorghum (*Sorghum bicolor* L. Moench) Seedlings under Suboptimal Soil Moisture Environments. *PloS one*. 10(10): 1-15.
- Zuryanti D., Rahayu A., dan Rochman N. 2016. Pertumbuhan, Produksi dan Kualitas Bayam (*Amaranthus tricolor* L.) Pada Berbagai Dosis Pupuk Kandang Ayam dan Kalium Nitrat ( $KNO_3$ ). *Jurnal Agronida*. 2(2): 98-105.