



DAFTAR PUSTAKA

- Ahanger, M. A., N. S. Tomar, M. Tittal, S. Argall, and R. M. Agarwal. 2017. Plant growth under water/salt stress: ROS production; antioxidants and significance of added potassium under such conditions. *Physiology and Molecular Biology of Plants*, 23(4):731–744.
- Alli, A. A. and O. E. Omofunmi. 2021. A Review of Soil Temperature Under a Controlled Irrigation System. *Journal of Research in Forestry, Wildlife & Environment*, 13(1): 50-59.
- Alscher, R. G., N. Erturk, and L. S. Heath. 2002. Role of superoxide dismutases (SODs) in controlling oxidative stress in plants. *Journal of Experimental Botany*, 53:1331–1341.
- Andriani, V. 2017. Pertumbuhan Dan Kadar Klorofil Tanaman Pakcoy (*Brassica rapa* L.) Terhadap Cekaman NaCl. *Stigma*,10 (2): 58-67.
- Arisandi, Y., and Y. Andriani. 2007. *Tanaman Obat dan Pengobatan Alternatif*. Setia Kawan. Jakarta. P: 29.
- Armita, D., and N. A. W. Alawiyatun. 2020. Studi Pertumbuhan dan Aktivitas Enzim Antioksidan pada Kultur In Vitro Tomat Akibat Cekaman Salinitas. *Plantropica: Journal of Agricultural Science*, 5(1): 64-73.
- Ashari-Esna, M., and M. Gholami. 2010. The effect of increased chloride (Cl-) content in nutrient solution on yield and quality of strawberry (*Fragaria ananassa* Duch.) fruits. *Journal of Fruit and Ornamental Plant Research*, 18(1), 37-44.
- Asril, M., M. S. Ginting, Suyono, A. D. N. Septariani, Risnawati, E. Joeniarti, M. Adiwna, A. P. Pradana, Y. Susanti, E. P. Ramdan, dan Junairah. (2022). *Pengantar Perlindungan Tanaman*. Yayasan Kita Menulis. Medan. Pp: 89-91.
- 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.
- Bermawie, N., S. Purwiyanti, and Mardiana. 2008. Keragaman Sifat Morfologi, Hasil dan Mutu Plasma Nutfah Pegagan (*Centella asiatica* (L.) Urban.). *Bulletin Litro*, 19(1): 1-17.
- Dalimarta, S. 2006. *Atlas Tumbuhan Indonesia*. Tribus Agriwidaya. Jakarta, p: 214.
- Djukri. 2009. Cekaman Salinitas Terhadap Pertumbuhan Tanaman. *Prosiding Seminar Nasional Penelitian, Pendidikan dan Penerapan MIPA Fakultas MIPA, Universitas Negeri Yogyakarta*, B-49-B55.
- Duke, A. J. 2002. *Handbook of Medicinal Herbs*. CRC Press. London. P: 344.
- George, M., L. Joseph, and Ramaswamy. 2009. Anti-allergic, antipruritic, and anti-inflammatory activities of *Centella asiatica* extracts. *African Journal of Traditional, Complementary and Alternative Medicines*, 6(4): 554–559.
- 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 Brasiliensis*, 29(9): 0102-6712.
- Gomez, L. A. 2021. Growth Evaluation and Proximate Analysis of Gotu Kola (*Centella Asiatica* L.). *Asian Journal of Fundamental and Applied Sciences*, 2(2): 65-76.



- Hamid, A. A., Z. Shah, R. Muse, and S. Mohamed. 2002. Characterization of antioxidative activities of various extracts of *Centella asiatica* (L) Urban. *Food Chemistry*, 77(4): 465–469.
- Hartoyo, B., O. Trisilawati, and M. Ghulamahdi. 2015. Tanggap Pertumbuhan dan Biomassa Pegagan (*Centella asiatica* (L.) Urban) Pada Aplikasi Fungi Mikoriza Arbuskula dan Pemupukan di Tanah Andosol. *Buletin Penelitian Tanaman Rempah dan Obat*, 26(2):87-98.
- Ibrahim, M. H., N. I. Shibli, N, A. A. Izad, and N. A. M Zain. 2018. Growth, Chlorophyll Fluorescence, Leaf Gas Exchange and Phytochemicals of *Centella asiatica* Exposed to Salinity Stress. *Annual Research & Review in Biology*, 27(2): 1-13.
- Institut Pertanian Bogor. 2005. *Pasar Domestik dan Eksport Produk Tanaman Obat (Biofarmaka)*. Pusat Studi Biofarmaka IPB. Bogor.
- ITIS. 2021. *Centella asiatica* (L.) Urban. https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=29612#null. Diakses 28 November 2021.
- Ivushkin, K., H. Bartholomeus, A. K. Bregt, A. Pulatov, B. Kempen, and L. de Sousa, L. 2019. Global mapping of soil salinity change. *Remote Sensing of Environment*, 231: 1-12.
- Januwati, M. and H. Muhammad. 1992. Cara budidaya pegagan (*Centella asiatica* L.). *Warta Tumbuhan Obat Indonesia*, 1(2): 42-44.
- Lee, Y. S., D. Q. Jin, and E. J. Kwon. 2002. Asiatic acid, a triterpene, induces apoptosis through intracellular Ca²⁺ release and enhanced expression of p53 in HepG2 human hepatoma cells. *Cancer Letters*, 186(1): 83–91.
- Luczak, K., I. C. Kusza, C. R. Dulewska, and G. Kusza. 2021. Effect of NaCl road salt on the ionic composition of soils and *Aesculus hippocastanum* L. foliage and leaf damage intensity. *Science Report*, 11(5309): 1-10.
- Marklund, S., and G. Marklund. 1974. Involvement of the Superoxide Anion Radical in the Autoxidation of Pyrogallol and a Convenient Assay for Superoxide Dismutase. *European Journal of Biochemistry*, 47(1974): 469-474.
- Maslahah, M. S. N., and M. Januwati. 2016. Pengaruh Salinitas Terhadap Pertumbuhan, Produksi, dan Mutu Sambiloto (*Andrographis paniculata* Nees). *Jurnal Chemistry*, DOI:10.21082/BULLITTRO.V19N2.2008.%P.
- Maphuhla, N. G., F. B. Lewu, and O. O. Oyedeleji. Accumulation of Heavy Metal Concentration and Physicochemical Parameters in Soil from Alice Landfill Site in Eastern Cape, South Africa. *Research Square*, 2021: 1-18.
- Menezes, R. V., A. D. D. Azevedo Neto, M. D. O. Ribeiro, and A. M. W Cova. 2017. Growth and Contents of Organic and Inorganic Solutes in Amaranth Under Salt Stress. *Pesqui. Agropecuária Trop.* 47: 22-30.
- Mindari, W. 2009. *Cekaman Garam dan Dampaknya pada Kesuburan Tanah dan Pertumbuhan Tanaman*. UPN Veteran Jawa Timur. Surabaya, P: 3-6, 23, 53.
- Naz, E., and M. Ahmad. 2009. Evaluation of five indigenous medicinal plants of Sindh, Pakistan for their antifungal potential. *Pakistan Journal of Scientific and Industrial Research*, 52(6): 328–333.



- Ogunka, N. C. U., F. U. Igwe, J. Agwu, O. J. Peter, and P. H. Wolugbom. 2020. Nutrient and Phytochemical Composition of *Centella asiatica* Leaves. *Medicinal & Aromatic Plants*, 9(346): 1-7.
- Omoruyi, F., J. Sparks, D. Stennett, & L. Dilworth. 2020. Superoxide Dismutase as a Measure of Antioxidant Status and its Application to Diabetes. *Diabetes: Oxidative Stress and Dietary Antioxidants*, (2020): 409–417. doi:10.1016/b978-0-12-815776-3.00041-3.
- Orhan, I. E. 2012. *Centella asiatica* (L.) Urban: From Traditional Medicine to Modern Medicine with Neuroprotective Potential. Hindawi Publishing Corporation (2012): 1-8. doi:10.1155/2012/946259
- Pardossi, A., F. Malorgio, and F. Tognoni. 1999. Salt Tolerance and Mineral Relations for Celery. *Journal pf Plant Nutrition*, 22(1): 151-161.
- Pessarakli, M. 2011. *Handbook of Plant and Crop Stress*. CRC Press. Boca Raton, p: 101.
- Pracaya. 2008. *Hama dan Penyakit Tanaman*. Penebar Swadaya. Jakarta p: 307.
- Pranasari, R. A., N. Nurhidayati, and K. I. Purwani. 2012. Persaingan Tanaman Jagung (*Zea mays*) dan Rumput Teki (*Cyperus rotundus*) Pada Pengaruh Cekaman Garam (NaCl). *Jurnal Sains dan Seni*, 1(1): 54 – 57.
- 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, 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. 7-15.
- Rahajanirina, V., S. O. R. Raoseta, E. Roger, H. Razafindrazaka, S. Pirotais, M. Boucher, and P. Danthu. 2012. The Influence of Certain Taxonomic and Environmental Parameters on Biomass Production and Triterpenoid Content in the Leaves of *Centella asiatica*. *Journal Chemistry and Biodiversity*, 9(2): 298-308.
- Rahneshan, Z., F. Nasibi, and 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. 73-82.
- Rao, V. G. M. L., and S. A. Mastan. 2007. Antidiabetic effects of methanolic extract of *Centella asiatica* (Linn.) on induced hyperglycemic rats. *Biosciences Biotechnology Research Asia*, 4(2): 721–724.
- Riyadi, A. D. R., and D. U. Siswanti. 2022. Effect of Alkaline and Drought Stress on Growth and SOD Content in Basil Plant (*Ocimum americanum*). *Jurnal Biodjati*, 7(1):119–131.
- Setiawan, T., and D. Shiddiq. 2013. Pengaruh Cekaman Kurang Air terhadap Beberapa Karakter Fisiologis Tanaman Nilam (*Pogostemon cablin* Benth). *Jurnal Littri*, 19 (3):108-116.
- Senthilkumar, N., P. Varma, and G. Gurusubramanian. 2009. Larvicidal and adulticidal activities of some medicinal plants against the Malarial Vector *Anopheles stephensi* (Liston). *Parasitology Research*, 104(2): 237–244.
- Shetty, B. S., S. L. Udupa, and A. L. Udupa. 2008. Biochemical analysis of granulation tissue in steroid and *Centella asiatica* (Linn) treated rats. *Pharmacologyonline*, 2: 624–632.



- 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 November 2022.
- Siswanti, D. U., and N. Umah. 2021. Effect of Biofertilizer and Salinity on Growth and Chlorophyll Content of *Amaranthus tricolor* L. *IOP Conf. Ser.: Earth Environ. Sci.* 662 012019. doi:10.1088/1755-1315/662/1/012019
- Smolen, S., A. Lukasiewicz, M. Klimek-Chodacka, and R. Baranski. 2020. Effect of Soil Salinity and Foliar Application of Jasmonic Acid on Mineral Balance of Carrot Plants Tolerant and Sensitive to Salt Stress. *Journal Agronomy*, 10(659): 1-21.
- Somchit, M. N., M. R. Sulaiman, and A. Zuraini. 2004. Antinociceptive and antiinflammatory effects of *Centella asiatica*. *Indian Journal of Pharmacology*, 36(6): 377–380.
- Stephenie, S., Y. P. Chang, A. Gnanasekaran, and N. M. Esa. 2020. An Insight on Superoxide Dismutase (SOD) from Plants for Mammalian Health Enhancement. *Journal of Functional Foods*, 68(2020): 1-10.
- Sudhakaran, M. V. 2017. Botanical Pharmacognosy of *Centella asiatica* (Linn.) Urban. *Journal Pharmacogn*, 9(4): 546-558.
- Sutardi. 2016. Kandungan Bahan Aktif Tanaman Pegagan dan Khasiatnya untuk Meningkatkan Sistem Imun Tubuh. *Jurnal Litbang Pertanian*, 35(3): 121-130.
- Syahputra, S., T. Kurniawan, Hasanuddin. 2022. The Effect of Urea and KCl Fertilizer Doses on the Growth of Gotu Kola (*Centella asiatica*). *Jurnal Ilmiah Mahasiswa Pertanian*, 7(2): 93-101.
- Tan, L. V., and T. Thanh. 2021. The Effects of Salinity on Changes in Characteristics of Soils Collected in a Saline Region of the Mekong Delta, Vietnam. *De Gruyter*, 19: 471-480.
- Tunceturk, M., R. Tunceturk, B. Yildirim, and V. Ciftci. 2011. Effect of Salinity Stress on Plant Fresh Weight and Nutrient Composition of some Canola (*Brassica napus* L.) cultivars. *African Journal of Biotechnology*, 10(10): 1827-1832.
- Vangronsveld, J., R. Herzig, N. Weyens, J. Boulet, K. Adriaensen, A. Ruttens, T. Thewys, A. Vassilev, E. Meers, and E. Nehnevajova. 2009. Phytoremediation of Contaminated Soil and Groundwater: Lessons from the Field. *Environ Sci Pollut Res*, 16:765-794.
- Wang, X. S., Q. Dong, J. P. Zuo, and J. N. Fang. 2003. Structure and potential immunological activity of a pectin from *Centella asiatica* (L.) Urban. *Carbohydrate Research*, 338(22): 2393–2402.
- Widiyastuti, Y., W. Bambang, dan M. Januwati. 2016. *Pegagan (Centella asiatica (L.) Urb.) Tumbuhan Berkhasiat Multi Manfaat*. Balai Besar Penelitian dan Pengembangan Tanaman Obat dan Obat Tradisional. Semarang.
- Wijayanto, N., and Nurunnajah. 2012. Intensitas Cahaya, Suhu, Kelembaban dan Perakaran Lateral Mahoni (*Swietenia macrophylla* King.) di RPH Babakan Madang, BKPH Bogor, KPH Bogor. *Jurnal Silvikultur Tropika*, 3(1): 8-13.
- Wijeweera, P., J. T. Arnason, D. Koszycki, and Z. Merali. 2006. Evaluation of anxiolytic properties of Gotukola—(*Centella asiatica*) extracts and asiaticoside in rat behavioral models. *Phytomedicine*, 13(9): 668–676.



- Winarto, W. P., and M. Surbakti. 2003. *Khasiat dan Manfaat Pegagan Tanaman Penambah Daya Ingat*. PT Agro Media Pustaka. Jakarta, pp: 1-8.
- Yoosook, C., N. Bunyapraphatsara, Y. Boonyakiat, and C. Kantasuk. 2000. Anti-herpes simplex virus activities of crude water extracts of Thai medicinal plants. *Phytomedicine*, 6(6): 411–419.
- Zaidan, M. R., A. Noor Rain, A. R. Badrul, A. Adlin, A. Norazah, and I. Zakiah. 2005. In vitro screening of five local medicinal plants for antibacterial activity using disc diffusion method. *Tropical Biomedicine*, 22(2): 165–170.
- Zhang, C., M. E. Bruins, Z. Yang, S. Liu, and P. Rao. 2016. A New Formula to Calculate Activity of Superoxide Dismutase in Indirect Assays. *Analytical Biochemistry*, 503, 65-67. <https://doi.org/10.1016/j.ab.2016.03.014>
- Zheng, C. J., and L. P. Qin. 2007. Chemical components of *Centella asiatica* and their bioactives. *Journal of Chinese Integrative Medicine*, 5: 348-351.
- Zhu, J. K. 2001. Plant Salt Tolerance. *Trends in Plant Science*. 6: 66-71.