

DAFTAR PUSTAKA

- Adin, A., Firdaus, R., Haerudin, H., Rokhman, F., & Harpenas, A. (2023). A Review: TSS (*True Shallot Seed*) development in Indonesia and its health benefit. *Proceedings of the International Symposium Southeast Asia Vegetable 2021 (SEAVEG 2021)*. Purwakarta, Indonesia. pp. 208-223. DOI: 10.2991/978-94-6463-028-2_24
- Agati, G., Azzarello, E., Pollastri, S., & Tattini, M. (2012). Flavonoids as antioxidants in plants: Location and functional significance. *Plant Science*, 196, 67–76. DOI: 10.1016/j.plantsci.2012.07.014
- Atif, M. J., Amin, B., Ghani, M. L., Hayat, S., Ali, M., Zhang, Y., & Cheng, Z. (2019). Influence of different photoperiod and temperature regimes on growth and bulb quality of garlic (*Allium sativum* L.) cultivars. *Agronomy*, 9 (12), 879. DOI: 10.3390/agronomy9120879
- Atif, M. J., Ahanger, M. A., Amin, B., Ghani, M. I., Ali, M., & Cheng, Z. (2020). Mechanism of *Allium* crops bulb enlargement in response to photoperiod: a review. *International Journal of Molecular Sciences*, 21(4), 1325. DOI: 10.3390/ijms21041325
- Atman, A., Suliansyah, I., Anwar, A., & Yasin, S. (2021). Growth and yield of different varieties of *true shallot seed* on highland in West Sumatra, Indonesia. *International Journal of Agronomy*, 2021(2), 1-6. DOI: 10.1155/2021/5563128.
- Austin, R. B. (1971). Bulb formation in onions as affected by photoperiod and spectral quality of light. *Journal of Horticultural Science*, 47(4), 493-504. DOI: 10.1080/00221589.1972.11514492
- Badan Pusat Statistik, (2014). *Statistik tanaman sayuran dan buah-buahan semusim Indonesia*. BPS Pusat. Jakarta.
- Batutis, E. J., & Ewing, E. E. (1982). Far red reversal of red light inhibition of potato tuberization. *Plant Physiology*, 69(3), 672–674. DOI: 10.1104/pp.69.3.672.
- Bertaud, D.S. (1986). The effects of light on bulbing in onions. *Proceedings Agronomy Society of New Zealand*, 16, 79-87
- Bose, S. K., Howlader, P., Jia, X., Wang, W., Yin, H., & He, W. (2017). Ultraviolet-B radiation accelerates leaf senescence in *Allium sativum* through ROS mediated signalling pathway. *Plant Physiology and Biochemistry*, 118, 79–89. DOI: 10.1016/j.plaphy.2017.06.003.

- Brewster, J. L. (2008). *Onions and other vegetable alliums* (2nd ed.). CABI Publishing.
- Casal, J. J. (2013). Photoreceptor signaling networks in plant responses to shade. *Annual Review of Plant Biology*, 64, 403–427. DOI: 10.1146/annurev-arplant-050312-120221.
- Cheyrier, V. (2012). Phenolic compounds: from plants to foods. *Phytochemistry Reviews*, 11, 153–177. DOI: 10.1007/s11101-012-9242-8
- Choirunnisa, J. P., & Wardana, R. (2021). Effect of photoperiod and KNO₃ concentration on the induction and development of potato (*Solanum tuberosum*) microtuber in vitro. *Cell Biology & Development*, 5(2), 70-75. DOI: 10.13057/cellbioldev/t050203
- Collings, D. A. (2019). Anthocyanin in the vacuole of red onion epidermal cells quenches other fluorescent molecules. *Plants*, 8(12), 596. DOI: 10.3390/plants8120596.
- Cui, L., Li, M., Zhang, X., Guo, Z., Li, K., Shi, Y., Wang, Q., & Guo, H. (2023). Enhanced UV-B radiation in potato stems and leaves promotes the accumulation of anthocyanins in tubers. *Current Issues in Molecular Biology*, 45(12), 9945–9960. DOI: 10.3390/cimb451209945.
- Demotes-Mainard, S., Péron, T., Corot, A., Bertheloot, J., Le Gourrierrec, J., Pelleschi-Travier, S., Crespel, L., Morel, P., Huché-Thélier, L., Boumaza, R., Vian, A., Guérin, V., Leduc, N., & Sakr, S. (2016). Plant responses to red and far-red lights, applications in horticulture. *Environmental and Experimental Botany*, 121, 4–21. DOI: 10.1016/j.envexpbot.2015.05.010
- Depkes RI. (2017). *Farmakope herbal indonesia, Edisi II*. Departemen Kesehatan Republik Indonesia. Jakarta.
- Dixon, R. A., & Paiva, N. L. (1995). Stress-induced phenylpropanoid metabolism. *The Plant Cell*, 7(7), 1085–1097. DOI: 10.1105/tpc.7.7.1085
- Downes, K., Chope, G. A., & Terry, L. A. (2010). Relationship between colour and biochemical composition of skin from red baron onion bulbs cured at different temperatures. *Acta Horti*, 877, 1175-1181. DOI: 10.17660/ActaHorti.2010.877.160
- Franklin, K. A., & Quail, P. H. (2010). Phytochrome functions in Arabidopsis development. *Journal of Experimental Botany*, 61(1), 11–24. DOI: 10.1093/jxb/erp304.
- Frija, L. M. T., Ismael, A., & Cristiano, L. S. (2010). Photochemical transformations of tetrazole derivatives: applications in organic synthesis. *Molecules*, 15: 3757-3774. DOI: 10.3390/molecules15053757

- Global Biodiversity Information Facility (GBIF). (2024). *Allium cepa* L. <https://www.gbif.org/species/2857717>. 27 Agustus 2024.
- Hapsari, L. W. & D. Saptadi. (2018). Respon beberapa varietas bawang putih (*Allium sativum* L.) dalam pertumbuhan dan potensi pembentukan umbi mikro terhadap pemberian umbi mikro terhadap pemberian berbagai konsentrasi sukrosa. *Jurnal Produksi Tanaman*, 6(9), 2166 – 2174.
- Hernández, I., Alegre, L., Van Breusegem, F., & Munné-Bosch, S. (2016). How relevant are flavonoids as antioxidants in plants. *Trends in Plant Science*, 14(3), 125–132. DOI: 10.1016/j.tplants.2008.12.003
- Hideg, É., Jansen, M. A. K., & Strid, Å. (2013). UV-B exposure, ROS, and stress: Inseparable companions or loosely linked associates. *Trends in Plant Science*, 18(2), 107–115. DOI: 10.1016/j.tplants.2012.09.003
- Huché-Théliet, L., Crespel, L., Gourriec, J. L., Morel, P., Sakr, S., & Leduc, N. (2016). Light signaling and plant responses to blue and UV radiations—Perspectives for applications in horticulture. *Environmental and Experimental Botany*, 121, 22–38. DOI: 10.1016/j.envexpbot.2015.06.009.
- Ismed, F., Desti, W. N., Arifa, N., Rustini, R., & Putra, D. P. (2022). TLC-Bioautographic and LC-MS/MS detection of antimicrobial compounds from four semipolar extracts of cladonia species. *Proceedings of the 2nd International Conference on Contemporary Science and Clinical Pharmacy 2021 (ICCSCP 2021)*, 40, 49-59. DOI: 10.29991/ahsr.k.211105.008
- Jaelani. (2007). *Khasiat bawang merah*. Kanisius. Yogyakarta.
- Jansen, M. A. K., Gaba, V., & Greenberg, B. M. (1998). Higher plants and UV-B radiation: Balancing damage, repair and acclimation. *Trends in Plant Science*, 3(4), 131–135. DOI: 10.1016/S1360-1385(98)01215-1.
- Jansen, M. A. K., & Bornman, J. F. (2012). UV-B radiation: From generic stressor to specific regulator. *Physiologia Plantarum*, 145(4), 501–504. DOI: 10.1111/j.1399-3054.2012.01656.x
- Jenkins, G. I. (2017). Photomorphogenic responses to ultraviolet-B light. *Plant, Cell & Environment*, 40(11), 2543–2550. DOI: 10.1111/pce.12934.
- Kami, C., Lorrain, S., Hornitschek, P., & Fankhauser, C. (2010). Light-regulated plant growth and development. *Current Topics in Developmental Biology*, 91, 29-66. DOI: 10.1016/S0070-2153(10)91002-8
- Kasote, D. M., Katyare, S. S., Hegde, M. V., & Bae, H. (2015). Significance of antioxidant potential of plants and its relevance to therapeutic applications. *International Journal of Biological Sciences*, 11(8), 982–991. DOI: 10.7150/ijbs.12096

- Keller, J. & Lesemann, D. (1997). Application of in vitro culture to onion and garlic for the management and use of genetic resources at Gatersleben. In: Burba, J.L., Galmarini, R.C. (Eds.), *Proceedings of the First International Symposium on Edible Alliaceae. Acta Hort*, 433, 141-150. DOI: 10.17660/ActaHortic.1997.433.13
- Khokhar, K. M. (2017). Environmental and genotypic effects on bulb development in onion – a review. *The Journal of Horticultural Science and Biotechnology*, 92 (5), 448-454. DOI: 10.1080/14620316.2017.1314199
- Korkina, L. (2007). Phenylpropanoids as naturally occurring antioxidants: From plant defense to human health. *Cellular and Molecular Biology*, 53(1), 15–25.
- Krupa, S. V., McGrath, M. T., Andersen, C. P., Booker, F. L., Burkey, K. O., Chappelka, A. H., & Ziska, L. H. (2007). Ambient ozone and plant health. *Plant Disease*, 85(1), 4-12. DOI : 10.1094/PDIS.2001.85.1.4
- Kumari, R., & Prasad, M. N. V. (2013). Medicinal plant active compounds produced by UV-B exposure. *Frontiers in Plant Science*, 19(12), 225-254. DOI: 10.1007/978-94-007-5961-9_8
- Laby, R. J., Kincad, M. S., Kim, D., & Gibson, S. I. (2000). The Arabidopsis sugar-insensitive mutants *sis4* and *sis5* are defective in abscisic acid synthesis and response. *Plant Journal*, 23(5), 587-596. DOI :10.1046/j.1365-313x.2000.00833.x.
- Le Guen-Le Saos, F., Hourmant, A., Esnault, F., & Chauvin, J. E. (2002). In vitro bulb development in shallot (*Allium cepa* L. Aggregatum Group): Effects of anti-gibberellins, Sucrose and Light. *Annals of Botany*, 89: 419-425. DOI: 10.1093/aob/mcf063
- Lercari, B. (1982). The effect of far-red light on the photoperiodic regulation of carbohydrate accumulation in *Allium cepa* L. *Physiologia Plantarum*, 54(4), 475-479. DOI: 10.1111/j.1339-3054.1982.tb00711.x
- Li, J., Li, Y., Chen, Y., Xu, S., Wu, X., Wu, C., Zhang, N., & Cao, K. (2024). Quantifying the effects of far-red light on lettuce photosynthesis and growth using a 3D modelling approach. *Frontiers in Plant Science*, 15, 1492431. DOI: 10.3389/fpls.2024.1492431
- Luthria, D. L., & Pastor-Corrales, M. A. (2006). Phenolic acids content of fifteen dry edible bean (*Phaseolus vulgaris* L.) varieties. *Journal of Food Composition and Analysis*, 19(2-3), 205–211. DOI: 10.1016/j.jfca.2005.09.003
- Madila, M. H. (2019). Respon pertumbuhan dan produksi bawang merah (*Allium ascalonicum*. L) asal biji terhadap pemberian pupuk NPK dan pupuk organik cair. *Skripsi*. Universitas Muslim Indonesia. Makassar.

- Mardiyanto, T. C., Retno, P., Bambang, P., Retno, E. (2017). Persepsi petani terhadap inovasi produksi umbi mini bawang merah asal biji (*true seed of shallot/tss*) ramah lingkungan di kabupaten grobogan. *Jurnal Ilmu-Ilmu Pertanian*, 24(1), 41-53.
- Mariyah, Y. (2020). Uji fitokimia dan aktivitas antioksidan dan ekstrak kesambi (*Scleicheaoleosa* (lour.) oken) dengan pelarut metanol. *Skripsi*. Universitas Islam Negeri Maulana Malik Ibrahim. Malang.
- Melati, P. (2021). Uji aktivitas antioksidan, sitotoksisitas dan GC-MS ekstrak methanol alga hijau *Boergesenia forbesii* (Harvey) Feldmann dari Pantai panjang Bengkulu. *Jurnal Pengelolaan Laboratorium Sains dan Teknologi*, 1(1), 10-24. DOI: 10.33369/labsaintek.v1i1.15432
- Michalak, A. (2006). Phenolic compounds and their antioxidant activity in plants growing under heavy metal stress. *Polish Journal of Environmental Studies*, 15(4), 523–530.
- Mondal, M.F., Brewster, J.L., Morris, G.E.L. & Butler, H.A. (1986). Bulb development in onion (*Allium cepa* L.) I. Effects of plant density and sowing date in field conditions. *Annals of Botany*, 58(2), 187-195. DOI: 10.1093/oxfordjournals.aob.a087197
- Nashnoush, H., & Rodgers, P. (2020). The non-thermal effect of UV-B irradiation on onion growth. *Journal of Emerging Investigators*, 3. DOI: 10.5539/jas.v15n4p45.
- O'Hara, A., Headland, L. R., Diaz-Ramos, L. A., Morales, L. O., Strid, A., and Jenkins, G. I. (2019). Regulation of Arabidopsis gene expression by low fluence rate UV-B independently of UVR8 and stress signaling. *Photochemical and Photobiological Sciences*, 18, 1675-1684. DOI: 10.1039/c9pp00151d
- Octaviani, M., Fadhli, H., & Yuneistya, E. (2019). Uji aktivitas antimikroba ekstrak etanol kulit bawang merah (*Allium cepa* l.) dengan metode difusi cakram. *Pharmaceutical Sciences and Research*, 6(1), 62-68.
- Palma, C. F. F., Castro-alves, V., Rosenqvist, E., Ottosen, C., Strid, A., & Morales, L. O. (2021). Effects of UV radiation on transcript and metabolite accumulation are dependent on monochromatic light background in cucumber. *Physiologia Plantarum*, 172(4), 1128-1141. DOI: 10.1111/ppl.13551
- Pangestuti, R. (2022). Agregasi umbi dan produktivitas bawang merah (*Allium cepa* L. Aggregatum group) Asal Biji. *Disertasi*. Universitas Gadjah Mada.
- Pittari, E., Moio, L., & Piombino, P. (2021). Interactions between polyphenols and volatile compounds in wine: a literature review on physicochemical and sensory insights. *Applied Sciences*, 11(3), 885–902. DOI: 10.3390/app11031157

- Poorter, H., Nildas, K. J., Reich, P. B., Oleksyn, J., Poot, P., & Mommer, L. (2012). Biomass allocation to leaves, stems and roots: meta-analyses of interspecific variation and environmental control. *New Phytologist*, 193, 30-50. DOI: 10.1111/j.1469-8137.2011.03952.x
- Pusat Data dan Sistem Informasi Pertanian. (2020). *Outlook Bawang Merah 2020*. Kementerian Pertanian Republik Indonesia.
- Rajiman, S. M. (2022). Viabilitas dan vigor berbagai varietas true shallot seed dengan perendaman jenis zat pengatur tumbuh (ZPT) alami. *Agritech*, 24(2), 131-137.
- Qi, W., Ma, J., Zhang, J., Gui, M., Li, J., & Zhang, L. (2020). Effects of low doses of UV-B radiation supplementation on tuber quality in purple potato (*Solanum tuberosum* L.). *Plant Signaling & Behavior*, 15(9), 1783490. DOI: 10.1080/15592324.2020.1783490
- Renz, W., Wood, M. G., Suhadolnik, J., Ravichandran, R., & Iyengar, R. (2001). *Stabilized adhesive compositions containing highly soluble, high extinction photostable hydroxyphenyl-s-triazine UV absorbers and laminated articles derived therefrom*. (U.S. Patent No. 6,191,199 B1). U.S. Patent and Trademark Office.
- Rice, E. L. (1984). *Allelopathy*. Orlando. Academic Press.
- Rizzini, L., Favory, J. J., Cloix, C., Faggionato, D., O'hara, A., Kasiserli, E., ... & Ulm, R. (2011). Perception of UV-B by the Arabidopsis UVR8 protein. *Science*, 332(6025), 103-106. DOI: 10.1126/science.1200660
- Rodov, V., Tietel, Z., Vinokur, Y., Horev, B., & Eshel, D. (2010). Ultraviolet light stimulates flavonol accumulation in peeled onions and controls microorganisms on their surface. *Journal of Agricultural and Food Chemistry*, 58(16), 9071–9076. DOI: 10.1021/jf1016016.
- Roslani, R., Hilman, Y., Hidayat, I. M., dan Sulastrini, I. (2014). Teknik produksi umbi mini bawang merah asal biji (*True Shallot Seed*) dengan jenis media tanam dan dosis NPK yang tepat di dataran rendah. *Journal Horticultural*, 24 (3), 239-248. DOI: 10.21082/jhort.v24n3.2014.p238-248
- Roslani, R. (2022). *Benih biji bawang merah (true seed of shallot) di Indonesia*. IAARD Press. Jakarta.
- Rozema, J., Björn, L. O., Bornman, J. F., Gaberšček, A., Häder, D. P., Trošt, T., Germ, M., Klisch, M., Gröniger, A., Sinha, R. P., Lebert, M., He, Y. Y., Buffoni-Hall, R., de Bakker, N. V. J., van de Staaij, J., & Meijkamp, B. B. (2002). The role of UV-B radiation in aquatic and terrestrial ecosystems—an experimental and functional analysis of the evolution of UV-absorbing compounds. *Journal of*

- Photochemistry and Photobiology B: Biology*, 66(1), 2–12. DOI: 10.1016/S1011-1344(01)00269-X
- Rukmana, R. (1994). *Bawang merah budidaya dan pengolahan pasca panen*. Kanisius, Yogyakarta.
- Sharma, A., Shahzad, B., Rehman, A., Bhardwaj, R., Landi, M., & Zheng, B. (2019). Response of phenylpropanoid pathway and the role of polyphenols in plants under abiotic stress. *Molecules*, 24(13), 2452. DOI: 10.3390/molecules24132452
- Shi, C., & Liu, H. (2021). How plants protect themselves from ultraviolet-B radiation stress. *Frontiers in Plant Science*, 13, 856627. DOI: 10.3389/fpls.2022.856627.
- Sinaga, R., Waluyo, N., Rahayu, A., Rosliani, R. (2021). Growth and yield of shallots (*Allium cepa* var *aggregatum* L.) under different seed bulbs storage period. *E3S Web of Conference*. DOI: 10.1051/E3SCONF/202130601043
- Smith, H. (2000). Phytochromes and light signal perception by plants-An emerging synthesis. *Nature*, 407(6804), 585-591. DOI: 10.1038/35036500
- Sobeih, W. Y., & Wright, C. J. (1987). The photoperiodic regulation of bulbing in onions (*Allium cepa* L.) III. Response to red : far-red ratio and cyclic lighting. *Journal of Horticultural Science*, 62, 379-389. DOI: 10.1080/14620316.1987.11515795
- Strid, Å. (2015). Changing scenario in plant UV-B research: UV-B from a generic stressor to a specific regulator. *Journal of Photochemistry and Photobiology B: Biology*, 151, 97–104. DOI: 10.1016/j.jphotobiol.2015.07.001.
- Supriatna, D., Mulyani, Y., Rostini, I., & Agung, M. U. K. (2019). Aktivitas antioksidan, kadar total flavonoid dan fenol ekstrak metanol kulit batang mangrove berdasarkan stadia pertumbuhannya. *Jurnal Perikanan dan Kelautan*, 10(35), 42.
- Suwandi. (2014). *Budidaya bawang merah di luar musim*. IAARD Press.
- Thomas, B., & Vince-Prue, D. (1997). *Photoperiodism in plants 2nd ed*). Academic Press.
- Tong, T., Zhang, W., Hu, S., Cao, R., Ma, N., Meng, Q., and Wang, J. (2022). UV-B irradiation inhibits root growth by reducing cell proliferation in the root meristem of *Arabidopsis thaliana*. *Frontiers in Plant Science*, 13, 829336. DOI: 10.3389/fpls.2022.829336.
- Wang, H., & Wang, X. (2015). Phytochrome signaling: Time to tighten up the loose ends. *Molecular Plant*, 8(4), 540-551. DOI: 10.1016/j.molp.2014.11.021

Wibowo, S. (2007). *Budidaya bawang merah*. Penebar Swadaya. Jakarta.

Widiastuti, A., Sawitri, W. D., Idris, M., Handayani, V. D. S., Winona, B., Silalahi, C. M., Matra, D. D., Doni, F., Setiyadi, A. H. (2024). Unraveling the potential uv-b induced gene expression of the primary and secondary metbaolisms against environmental stress in shallot. *Agricultural Science*, 12, 111-127. DOI: 107831/ras.12.0_111.

Witham, F. H., Blaydes, B. F., & Devlin, R. M. (1986). *Exercise in Plant Physiology Second Edition*. Prindle, Weber and Schmidt. Boston.

Yamazaki, K., Yano, A., Hidaka, K., Kitano, M., & Goto, E. (2021). Production of potato seed tubers under artificial LED light irradiation in a plant factory. *Frontiers in Plant Science*, 12, 633700. DOI: 10.3389/fpls.2021.633700.

Yao, X., Li, C., Li, S., Shi, Q., & Wang, X. (2021). Physiological responses of garlic (*Allium sativum* L.) to Ultraviolet-B radiation. *Environmental and Experimental Botany*, 183, 104362. DOI: 10.1016/j.envexpbot.2020.104362.

Zhang, M., Ju, J., Hu, Y., He, R., Song, J., and Liu, H. (2024). Meta-analysis of far-red light supplementation effects on vegetable crops. *Plants*, 13(17), 2508. DOI: 10.3390/plants13172508

