

DAFTAR PUSTAKA

- Apriyani, S., Wahyuni, S., Harsanti, E. S., Zu'Amah, H., Kartikawati, R., & Sutriadi, M. T. (2021). Effect of Inorganic Fertilizer and Farmyard Manure to Available P, Growth and Rice Yield in Rainfed Lowland Central Java. *In IOP Conference Series: Earth and Environmental Science*, 648(1), 12-19. <https://doi.org/10.1088/1755-1315/648/1/012190>
- Asie, E. R., Purba, J. H., Rumbang, N., Wildani, R., Multazam, Z., Sitohang, E. J., & Kartini, N. L. (2025). *Nutrisi Tanaman dan Pemupukan*. Padang; Azia Karya Bersama.
- Assopi, A. S., Hemon, A. F., & Ngawit, I. K. (2025). Pertumbuhan dan Daya Hasil Kacang Tanah (*Arachis hypogaea* L.) pada Beberapa Kerapatan Tanaman yang ditanam Secara Baris Ganda. *Jurnal Ilmiah Mahasiswa Agrokomplek*, 4(3), 760-769. <https://doi.org/10.29303/dwnnn432>
- Bai, Y., & Bai, X. (2024). Deep Learning-based Aquatic Plant Recognition Technique and Natural Ecological Aesthetics Conservation. *Crop Protection*, 184, 106765. <https://doi.org/10.1016/j.cropro.2024.106765>
- Chace, T. D. (2015). *Seeing Seeds: A Journey Into the World of Seedheads, Pods, and Fruit*. Hachette+ ORM.
- Chairiyah, N., et al. (2022). Pengaruh Dosis Pupuk NPK terhadap Pertumbuhan Vegetatif Tanaman Cabai Rawit (*Capsicum frutescens* L.). *Jurnal Ilmiah Respati*, 13(1), 1-8.
- Channab, B. E., El Idrissi, A., Zahouily, M., Essamlali, Y., & White, J. C. (2023). Starch-Based Controlled Release Fertilizers: A Review. *International Journal of Biological Macromolecules*, 238, 124075. <https://doi.org/10.1016/j.jbiomac.2023.124075>
- Dalimunthe, A. H. (2025). Pengaruh Komposisi Media Tanam terhadap Pertumbuhan Tanaman Sawi Hijau. *Circle Archive*, 1(7), 1-9.
- Das, R., & Biswas, S. (2022). Influence of Abiotic Stresses on Seed Production and Quality. In *Seed Biology Updates*. Intechopen.
- Dong, B., Liu, M., Zhang, Y., & Li, Q. (2020). Plant Density Regulates Stem Growth and Morphological Plasticity In Crop Systems. *Field Crops Research*, 246, 107-682.
- Edy, E., Ralle, A., Suherah, S., Numba, S., & Hasriani, H. (2023). Respon Pertumbuhan Dan Produksi Tanaman Jagung Manis Terhadap Kepadatan Populasi Dan Jenis Pupuk Kandang. *AGROTEK: Jurnal Ilmiah Ilmu Pertanian*, 7(1), 84-89. <https://doi.org/10.33096/agrotek.v7i1.296>

- El-Attar, A. B., Othman, E. Z., El-Bahbohy, R. M., & Mahmoud, A. W. M. (2023). Efficiency of Different Potassium Sources, and Soil Bio-Fertilizers For Growth, Productivity, and Biochemical Constituents of *Narcissus tazetta* L.). *Journal of Plant Nutrition*, 46(10), 2416-2433. <https://doi.org/10.1080/01904167.2022.2155552>
- Evinola, S. P. (2019). *Mengenal Ruang Lingkup Tanaman Hias*. Uwais Inspirasi Indonesia.
- Fadhila, N. A. (2019). Pengaruh Waktu Aplikasi dan Konsentrasi Pupuk Daun terhadap Pertumbuhan Vegetatif Tanaman Anggrek Dendrobium (*Dendrobium* Sp.). *Thesis*. Malang; Universitas Brawijaya.
- Feng, Y., Li, X., Duan, Z., & Wang, Z. (2022). Morphological Responses of Crops to Planting Density and Light Competition. *Agronomy*, 12(4), 945.
- Fitria, E. A., Utama, A. D., Suhendra, D., Harahap, E. J., Karina, I., Aisyah, S., & Rahman, A. (2024). *Pertanian Berkelanjutan*. Yayasan Tri Edukasi Ilmiah.
- Gao, H., Zhang, L., & Wang, X. (2019). Advances in Mass Propagation of *Nelumbo nucifera* for Commercial Use. *Horticultural Science*, 46(2), 215-230.
- Gardetti, M. A., & Muthu, S. S. (2015). The lotus flower fiber and sustainable luxury. In *Handbook of Sustainable Luxury Textiles and Fashion: Volume 1* (pp. 3-18). Singapore: Springer Singapore.
- Gowthami, R., Sharma, N., Pandey, R., & Agrawal, A. (2021). A Model for Integrated Approach to Germplasm Conservation of Asian Lotus (*Nelumbo nucifera* Gaertn.). *Genetic Resources and Crop Evolution*, 68(4), 1269-1282.
- Guo, X., An, X., & Wang, D. (2025). Effects of Stoichiometric Ratio Fertilization on Leaf Photosynthetic Characteristics and Fruit Quality of Blueberry. *BMC Plant Biology*, 25, 334. <https://doi.org/10.1186/s12870-025-06331-1>
- Harefa, D. N., Warwu, S. S., Waruwu, D. R. Y., & Ndraha, A. B. (2025). Dampak Jarak Tanam Terhadap Kompeti Nutrisi dan Cahaya pada Tanaman Bayam (*Amaranthus* SPP.). *Flora: Jurnal Kajian Ilmu Pertanian dan Perkebunan*, 2(1), 168-176.
- Hartatik, W., Mardiyati, E., Wibowo, H., Sukarto, A., & Yusron, Y. (2020). Formulasi dan Pola Kelarutan N Pupuk Urea-Zeolit Lepas Lambat. *Jurnal Tanah dan Iklim*, 44(1), 61-70.
- Hawkesford, M. J., Kopriva, S., & De Kok, L. J. (2022). Nutrient Use Efficiency and The Impact of Excess Nitrogen on Plant Growth. *Annals of Botany*, 130(2), 123–135.

- Hu, W., Lu, Z., Meng, F., Li, X., Cong, R., Ren, T., Sharkey, T. D., & Lu, J. (2020). The Reduction in Leaf Area Precedes that in Photosynthesis Under Potassium Deficiency: The Importance of Leaf Anatomy. *New Phytologist*, 227(6), 1749-1763. <https://doi.org/10.1111/nph.16644>
- Hulu, Y., Zebua, H. P., Gulo, D., Harefa, W. W., Hia, S. A., & Mendrofa, S. J. (2026). Pengaruh Pemupukan Nitrogen Terhadap Laju Fotosintesis, Kandungan Klorofil, Dan Pertumbuhan Tanaman Jagung (*Zea Mays* L.). *Jurnal Ilmu Agroteknologi Indonesia*, 2(1), 52-58.
- Ivani, N., & Wahyuni, E. S. (2024). Pengaruh Aplikasi Komposisi Pupuk NPK dan Konsentrasi Bakteri Fotosintesis terhadap Pertumbuhan dan Perkembangan Anggrek Bulan (*Phalaenopsis amabilis*). *Jurnal Bioshell*, 13(2), 117-122.
- Jaya, I. K. D. (2018). 4. Pertumbuhan dan Hasil Jagung Semi yang ditanam dengan Kerapatan dan Orientasi Berbeda. *Agroteksos*, 13(4), 196-200.
- Kim, S., & Lee, J. (2023). *Effect of NPK Fertilization on Primary Root Development and Root Base Weight in Horticultural Crops*. *Horticulture Environment and Biotechnology*, 64(5), 501–510. <https://doi.org/10.1007/s13580-023-00345-7>
- Kumar, D. L., Singh, M. K., Hiremath, V., Durga M, L., Jain, R., A, P., & Madhavi, K. (2025). Exploring The Versatility of Lotus: A Comprehensive Review of Utilisation Patterns, Genetics and Agronomy Aspects. *The Journal of Horticultural Science and Biotechnology*, 1-19. <https://doi.org/10.1080/14620316.2025.2496468>
- Li, C., Mo, H. B., Tian, D. K., Xu, Y. X., Meng, J., & Tilt, K. (2015). Genetic Diversity and Structure of American Lotus (*Nelumbo lutea* Willd.) in North America Revealed from Microsatellite Markers. *Scientia Horticulturae*, 189, 17-21. <https://doi.org/10.1016/j.scienta.2015.03.026>
- Lin, Z., Zhang, C., Cao, D., Damaris, R. N., & Yang, P. (2019). The Latest Studies on Lotus (*Nelumbo nucifera*)-an Emerging Horticultural Model Plant. *International Journal of Molecular Sciences*, 20(15), 3680. <https://doi.org/10.3390/ijms20153680>
- Liu, J., Wang, D., Yan, X., Jia, L., Chen, N., Liu, J., Zhao, P., Zhou, L., & Cao, Q. (2024). Effect of Nitrogen, Phosphorus and Potassium Fertilization Management on Soil Properties and Leaf Traits and Yield of Sapindus Mukorossi. *Frontiers in Plant Science*. <https://doi.org/10.3389/fpls.2024.1300683>
- Liu, Q., Xu, H., Li, Y., & Wang, S. (2022). Excess Nitrogen Application Alters Root Morphology and Biomass Allocation in Crop Plants. *Frontiers in Plant Science*, 13, 845.
- Liu, Z., & Buranaut, I. (2024). Applying Traditional Buddhist Lotus Patterns to Chinese Architectural Decoration. *Humanities, Arts and Social Sciences Studies*, 196-208.

- Lu, B., Nzei, J. M., Li, Z., Chen, J., Yang, X., & Perleberg, D. J. (2023). Population Genetics of *Nelumbo lutea* (American lotus) Near its Northwestern Range Limit. *Aquatic Botany*, 188, 103673. <https://doi.org/10.1016/j.aquabot.2023.103673>
- Lundeto, S. W., Anis, S. D., Kaunang, W. B., & Sumolang, C. I. J. (2021). Pengaruh Tingkat Kepadatan Tanaman terhadap Pertumbuhan Sorgum Brown Mid Rib (BMR) yang diberi Pupuk Bokashi Kotoran Ayam pada Kondisi Ternaung. *Zootec*, 41(1), 158-165. <https://doi.org/10.35792/zot.41.1.2021.32533>
- Mansyur, N. I., Pudjiwati, E. H., & Murti Laksono, A. (2021). *Pupuk dan Pemupukan*. Syiah Kuala University Press.
- Maulidan, K., & Putra, B. K. (2024). Pentingnya Unsur Hara Fosfor untuk Pertumbuhan Tanaman Padi. *Journal of Biopesticides and Agriculture Technology*, 1(2), 47-54. <https://doi.org/10.61511/jbiogritech.v1i2.2024.1163>
- ME Trenkel, T. (2021). *Slow-And Controlled-Release and Stabilized Fertilizers: an Option for Enhancing Nutrient Use Efficiency in Agriculture*. International Fertilizer Industry Association (IFA).
- Mommer, L., Visser, E. J. W., van Ruijven, J., et al. (2020). Belowground Competition and Root Plasticity in Plant Communities. *Trends in Plant Science*, 25(11), 1023–1036.
- Ningsih, R., Nugroho, S. E., Cahyono, E. H., Hasanah, M., Hendaryono, J., & Lestari, I. P. (2025). Aklimatisasi Pisang Cavendish Optimalisasi Pemberian Pupuk ZA pada Beberapa Media Aklimatisasi dalam Mendukung Produksi Bibit Pisang Cavendish di Laboratorium Kultur Jaringan Politeknik Negeri Jember. *Jurnal Pengembangan Potensi Laboratorium*, 5(1), 17-24. <https://orcid.org/0000-0003-1195-4208>
- Novitasari, R., Widyastuti, D. A., & Nurwahyunani, A. (2021). Kemampuan Tanaman Lotus (*Nelumbo nucifera*) dalam Menurunkan Kadar Fosfat pada Fitoremediasi Limbah Domestik Grey Water. In *Seminar Nasional Sains & Entrepreneurship*, 1(1).
- Nurdin, M. (2022). *Pengaruh Pupuk Kompos Kulit Durian Dan NPK 16: 16: 16 Terhadap Pertumbuhan Serta Produksi Tanaman Terung Telunjuk (Solanum Melongena L.)*. Riau; Universitas Islam Riau.
- Pant, C., & Sah, S. K. (2020). Managing Plant Population and Competition in Field Crops. *Acta Scientifica Malaysia*, 4(2), 57-60. <http://doi.org/10.26480/asm.02.2020.57.60>
- Pirhat, N. (2025). Analisis Respon Agronomis Jagung (*Zea mays* L.) terhadap Variasi Dosis Pupuk NPK pada Sistem Tumpangsari untuk Optimalisasi Pertumbuhan dan Produktivitas. *Jurnal Kridatama Sains dan Teknologi*, 7(02), 708-719. <https://doi.org/10.53863/kst.v7i02.1839>

- Putri, A. M. S. (2025). *Fisiologi Tanaman Pangan*. Padang; Azzia Karya Bersama.
- Qur'ania, A., Karlitasari, L., Maryana, S., Sudrajat, C., & Zolla, Z. (2023). Identifikasi Defisiensi Unsur Hara pada Tanaman Cabai Menggunakan Support Vector Machine. *J-Icon: Jurnal Komputer dan Informatika*, 11(1), 62-67. <https://doi.org/10.35508/jicon.v11i1.9803>
- Rahman, M. A., Islam, M. R., Hasan, M. M., & Karim, M. A. (2023). Nitrogen Management Improves Leaf Development and Growth Performance Under Controlled Cultivation Systems. *Plants*, 12(5), 1024. <https://doi.org/10.3390/plants12051024>
- Rather, A. M. U. D., Hajam, M. A., Bhat, M. S. A., & Malik, M. I. (2023). *Horticulture: Principles and Practices*. India: Academic Guru Publishing House.
- Rehatta, H., Lawalata, I. J., & Hiwy, A. (2023). Pengaruh Pemberian Konsentrasi Nutrisi AB Mix dan Media Tanam terhadap Pertumbuhan dan Hasil Tanaman Sawi Hijau (*Brassica rapa*) dengan Sistem Hidroponik Substrat. *Jurnal Agrologia*, 12(1), 36-43. <http://dx.doi.org/10.30598/ajibt.v11i2>
- Sari, N. L., Sasmita, E. R., & Irawati, E. B. (2023). Application of NPK Fertilizer and Paclobutrazol on Growth. In *BIO Web of Conferences*, 69(1). EDP Sciences.
- Singh, S. (2021). Structure and Properties of Lotus Seed Flour and Starch. In *Handbook of Cereals, Pulses, Roots, and Tubers* (pp. 583-596). CRC Press.
- Sinha, D., & Tandon, P. K. (2020). An Overview of Nitrogen, Phosphorus and Potassium: Key Players of Nutrition Process in Plants. *Sustainable Solutions for Elemental Deficiency and Excess in Crop Plants*, 85-117.
- Sopacua, B. N. H., & Koibur, M. (2017). Pengaruh Pengairan dan Pengaturan Populasi Terhadap Pertumbuhan Tanaman Jahe (*Zingiber officinale*) di Lahan Kampus STPP Manokwari Kabupaten Manokwari. *Jurnal Triton*, 8(2), 95-100.
- Srivastav, A. D., Singh, V., Singh, D., Singh, S., Patel, S. K., Kumar, D., & Singh, D. (2022). Nelumbo Nucifera Leaves As Source of Water-Repellent Wax: Extraction Through Polar and Non-Polar Organic Solvents. *Journal of the Indian Chemical Society*, 99(8), 100-632. <https://doi.org/10.1016/j.jics.2022.100632>
- Sun, H., Xin, J., Song, H., Chen, L., Yang, D., Yang, H., Deng, X., Liu, J., Cui, R., Su, Y., Dong, G., & Yang, M. (2025). Harnessing Genomic and Molecular Biology Resources for Genetic Improvement of Lotus: Current Achievements and Future Directions. *Horticulture Advances*, 3(1), 1. <https://doi.org/10.1007/s44281-024-00055-2>
- Sun, H., Zhang, X., Liu, M., & Chen, F. (2020). Interactive Effects of Planting Density and Nutrient Supply on Root Growth and Biomass Distribution. *Agricultural Water Management*, 241, 106356.

- Suwardi, S., & Aqil, M. (2020). Tingkat Populasi dengan Model Jarak Tanam Terhadap Pertumbuhan dan Produksi Jagung Hibrida. *Sainmatika: Jurnal Ilmiah Matematika dan Ilmu Pengetahuan Alam*, 17(2), 165-176. <http://orcid.org/0000-0002-1921-8785>
- Tando, E. (2019). Upaya Efisiensi dan Peningkatan Ketersediaan Nitrogen dalam Tanah Serta Serapan Nitrogen Pada Tanaman Padi Sawah (*Oryza sativa* L.). *Buana Sains*, 18(2), 171-180. <https://doi.org/10.33366/bs.v18i2.1190>
- Triadiawarman, D., Aryanto, D., & Krisbiyantoro, J. (2022). Peran Unsur Hara Makro terhadap Pertumbuhan dan Hasil Bawang Merah (*Allium cepa* L.). *Agrifor: Jurnal Ilmu Pertanian dan Kehutanan*, 21(1), 27-32.
- Wahyuni, P. S., & Parmila, P. (2019). Peran Bioteknologi dalam Pembuatan Pupuk Hayati. *Agro Bali: Agricultural Journal*, 2(1), 46-57.
- Wang, H., Shi, H., & Wang, Y. (2015). The Wetting of Leaf Surfaces and Its Ecological Significances. *Wetting and Wettability*, 11, 296-321. <https://dx.doi.org/10.5772/61205>
- Wang, R., Li, J., Tao, Z., & Yang, Y. (2021). Plant Density Regulates Root System Architecture and Nutrient Acquisition Efficiency. *Plants*, 10(11), 2374.
- Weiner, J., & Freckleton, R. P. (2020). Constant Final Yield and Resource Competition in Plant Populations. *Annual Review of Ecology, Evolution, and Systematics*, 51, 173–192.
- Welch, R. M. (2024). *Importance of Seed Mineral Nutrient Reserves in Crop Growth and Development*. In *Mineral Nutrition of Crops* (pp. 205-226). Florida; CRC Press
- Xu, H. (2021). Optimal Nitrogen Application Improves Vegetative Growth and Morphological Traits in Crop Plants. *Agronomy*, 11(12), 2456.
- Xu, L., Zhao, W., & Feng, X. (2019). Economic Potential and Market Trends of Ornamental Aquatic Plants. *Horticulture Economics*, 33(1), 12-27.
- Yakob, S. Z. B., Ulinuha, Z., Rokhminarsi, E., & Suroto, A. (2025). Pertumbuhan dan Kualitas Pasca Panen Bayam (*Amaranthus tricolor* L.) dengan Pengayaan Kalsium Nitrat ($\text{Ca}(\text{NO}_3)_2$) Melalui Sistem Hidroponik Wick. *Gontor Agrotech Science Journal*, 11(01), 16-26.
- Yang, D., Zhang, G., Li, H., & Sun, J. (2020). Influence of Planting Density on Light Interception and Stem Development In Crop Plants. *Agricultural Sciences*, 11(7), 589–598.
- Yang, R. et al. (2025). Optimizing NPK Nutrient Ratios for Three Leafy Vegetables Affects Vegetative Development. *Plants*, 14(23).

- Yuliani, S. E., Zubaidi, A., & Parwata, I. A. 2016. Pertumbuhan Dan Hasil Gandum Pada Berbagai Kerapatan Populasi Dan Dosis Pemupukan Urea. *Jurnal Agronomi Indonesia*, 46(3), 262-268.
- Zhang, Y., Zhao, L., Chen, X., & Wu, P. (2023). Over-Fertilization Reduces Root to Shoot Ratio and Nutrient Use Efficiency In Cultivated Crops. *Sustainability*, 15(7), 5891.
- Zhao, B., Dong, S., Zhang, J., & Liu, P. (2023). Excessive Nitrogen Application Reduces Growth Efficiency and Alters Physiological Traits In Cultivated Crops. *Plants*, 12(9), 1784.
- Zhao, G. (2024). Plant Compensatory Growth: Its Mechanisms and Implications to Agricultural Sustainability Under Global Environmental Changes. *International Journal of Sustainable Development & World Ecology*, 31(3), 348-360. <https://doi.org/10.1080/13504509.2023.2289475>
- Zhao, L., Wang, Y., & Chen, H. (2024). Moderate NPK fertilization enhances root biomass and architecture in leafy vegetables. *Journal of Plant Nutrition*, 47(12), 1543–1555. <https://doi.org/10.1080/01904167.2024.1678901>
- Zheng, P., Sun, H., Liu, J., Lin, J., Zhang, X., Qin, Y., Zhang, W., Xu, X., Deng, X., Yang, D., Wang, M., Zhang, Y., Song, H., Huang, Y., Orozco-Obando, W., Ming, R., & Yang, M. (2022). Comparative Analyses of American and Asian Lotus Genomes Reveal Insights Into Petal Color, Carpel Thermogenesis and Domestication. *The Plant Journal*, 110(5), 1498-1515. <https://doi.org/10.1111/tpj.15753>
- Zhou, P., Jin, Q., Qian, P., Wang, Y., Wang, X., Jiang, H., Yao, D., Liu, X., Liu, F., Li, J., & Xu, Y. (2022). Genetic Resources of Lotus (*Nelumbo*) and Their Improvement. *Ornamental Plant Research*, 2(1), 1-16. <https://doi.org/10.48130/OPR-2022-0005>
- Zhu, Y., Deng, K., Wu, P., Feng, K., Zhao, S., & Li, L. (2023). Effects of Slow-Release Fertilizer on Lotus Rhizome Yield and Starch Quality Under Different Fertilization Periods. *Plants*, 12(6), 1311. <https://doi.org/10.3390/plants12061311>
- Zikri, M. A., Al Farrosi, A. I., Rahmadani, N. F., & Nugraheni, I. R. (2024). Analisis Perubahan Garis Pantai Akibat Terjadinya Siklon Tropis Seroja di Pulau Sabu Nusa Tenggara Timur. *Jurnal Kelautan: Indonesian Journal of Marine Science and Technology*, 17(2), 1-12. <https://doi.org/10.21107/jk.v17i2.24748>