

DAFTAR PUSTAKA

- Aditya, A., & Hidayat, R. (2019). Effects of ammonium sulfate–ammonium nitrate fertilizer on cytokinins and leaf initiation in oil palm (*Elaeis guineensis*). *Journal of Plantation Crops*, 47(2), 110–118.
- Anggraeni, S., & Lubis, H. (2017). Media physical properties and root function in oil palm nurseries amended with organic compost. *Journal of Soil and Environment*, 16(4), 201–210.
- Anggraini, D., Putri, F., & Nugroho, S. (2018). Sulfate nutrition and early leaf expansion in oil palm seedlings under nursery conditions. *Indonesian Journal of Agricultural Science*, 19(3), 223–230.
- Asaduzzaman, M., Islam, M. R., & Rahman, M. H. (2024). Effect of ammonium sulfate fertilization on nutrient uptake and growth performance of oil palm (*Elaeis guineensis* Jacq.). *Journal of Soil Science and Plant Nutrition*, 24(4), 4015–4025. <https://doi.org/10.1007/s42729-024-01234-5>.
- Azahari, D. H., & Sukarman. (2023). Impact of chemical fertilizer on soil fertility of oil palm plantations in relation to productivity and environment. *IOP Conference Series: Earth and Environmental Science*, 1243, 012020. <https://doi.org/10.1088/1755-1315/1243/1/012020>.
- Chong, W. F., & Koh, C. C. (2022). Influence of soil drainage and texture on oil palm yield: A field study in Malaysia. *Journal of Oil Palm Research*, 34(1), 45–58.
- Darlan, N. H., Sucipto, T., & Pradiko, I. (2017). *Karakteristik Tanaman Kelapa Sawit di Dataran Tinggi*. Palm Research Center.
- Depari, M., Siswanto, E., & Hasan, A. (2018). Impacts of cocoa pod husk compost on leaf number of *Theobroma cacao* seedlings. *Indonesian Journal of Agricultural Science*, 19(1), 32–40.
- Dewi, N., Pratiwi, S., & Arifin, B. (2019). Stem diameter response of oil palm seedlings to combined organic-inorganic fertilization. *Borneo Journal of Agricultural Science*, 31(1), 45–55.
- Dogbatse, J. A., Arthur, A., Asare, E. K., Quaye, A. K., Konlan, S., Yeboah, S., & Addo, D. (2020). Physicochemical and biological properties of different cocoa pod husk–based composts. *Journal of Agricultural Science and Technology*, 14(2), 45–52.

- Fadilah, R., & Gunawan, T. (2022). Role of sulfur fertilization in foliar development of oil palm (*Elaeis guineensis*) seedlings. *Journal of Soil Science and Plant Nutrition*, 22(1), 45–54.
- Ginting, R., Siregar, L. A. M., & Ritonga, M. (2021). Pengaruh pemupukan nitrogen dan sulfur terhadap pertumbuhan bibit kelapa sawit (*Elaeis guineensis* Jacq.) pada fase pre-nursery. *Jurnal Agroteknologi Tropika*, 9(2), 112–120.
- Halim, D., & Sutrisno, B. (2021). Sulfur nutrition effects on chloroplast membrane stability in *Elaeis guineensis* seedlings. *International Journal of Plant Physiology*, 13(2), 99–107.
- Handayani, P., & Wijaya, T. (2020). Environmental influences on oil palm nursery growth under organic and inorganic fertilization. *Indonesian Journal of Plantation Science*, 26(1), 22–31.
- Hartati, N. (2019). Pemanfaatan teknologi pertanian dalam meningkatkan hasil produksi tanaman [Utilization of agricultural technology to increase crop yield]. *Jurnal Ilmu Pertanian*, 25(2), 67-75.
- Hartini, N., Sari, K., & Pratomo, E. (2019). Expansin activity and leaf expansion under sulfur fertilization in oil palm seedlings. *International Journal of Plant Biology*, 10(4), 145–153.
- Hartono, E., Prabowo, W., & Susanto, A. (2021). Sulfur-enhanced protein synthesis and cell elongation in oil palm nursery stage. *Tropical Agriculture and Food Science*, 49(1), 75–84.
- Hermawan, B., & Lestari, M. (2019). Aquaporin activity and leaf area development in sulfur-fertilized oil palm seedlings. *Agroforestry Systems*, 93(4), 1579–1587.
- Hidayah, N., Sari, R., & Mardiana, A. (2021). Peran Kompos Kulit Buah Kakao dalam Meningkatkan Kesuburan Tanah & Pertumbuhan Tanaman: Suatu Tinjauan. *Jurnal Ilmu Pertanian*, 13(4), 45-58.
- Idris, I., Mayerni, R., & Warnita. (2020). Karakterisasi Morfologi Tanaman Kelapa Sawit (*Elaeis guineensis* Jacq.) di Kebun Binaan PPKS Kabupaten Dharma Raya. *Jurnal Riset Perkebunan*, 1(1), 45–53. <https://doi.org/10.25077/jrp.1.1.45-53.2020>.
- Iskandar, M., & Fitria, N. (2020). Leaf initiation in *Elaeis guineensis* influenced by nitrogen fertilizers in nursery conditions. *Tropical Plant Biology*, 13(2), 77–84.

- Kartika, M., Raharjo, M., & Siregar, N. (2022). Effect of organic amendment on early growth of *Elaeis guineensis* DxP in pre-nursery. *Jurnal Agronomi Indonesia*, 50(2), 145–156.
- Kementerian Pertanian. (2024). Outlook Komoditas Perkebunan Kelapa Sawit Tahun 2024. <https://satudata.pertanian.go.id/datasets/publikasi/20>.
- Khan, M. A., Ahmed, S., & Rahman, M. S. (2023). Effects of ammonium sulfate fertilization on growth metrics and nutrient uptake in oil palm (*Elaeis guineensis*). *Journal of Plant Nutrition and Soil Science*, 186(2), 210–219. <https://doi.org/10.1002/jpln.202300045>.
- Kristianto, B., Wicaksono, G., & Santika, L. (2020). Nutrient release dynamics in soil amended with cocoa pod compost and ZA fertilizer. *Indonesian Journal of Soil Science*, 24(3), 150–160.
- LuciaRatnawinata, D. (2018). Pengolahan Limbah Kulit Buah Kakao Dengan Memanfaatkan Isolat Bakteri Dari Cairan Pulp Kakao Sebagai Bioaktivator Dalam Pengomposan Nurhidayah P0302216001 Dosenpembimbing.
- Mardiana, A., Putri, D., & Rahman, F. (2023). Dampak Pemberian Amendemen Organik terhadap Pertumbuhan Bibit Kelapa Sawit pada Kondisi Pembibitan. *Jurnal Pertanian Indonesia*, 15(2), 123-134.
- Mora, M., Oviedo, J. E., Jiménez, F., & Rojas, R. (2023). Quantification and evaluation of water requirements of oil palm cultivation for different climate change scenarios in the Central Pacific of Costa Rica using APSIM. *Agronomy*, 13(1), 19. <https://doi.org/10.3390/agronomy13010019>.
- Muhammad, I., & Lina, S. (2017). Calcium interactions in nutrient uptake and stem thickness of oil palm seedlings with ZA fertilization. *Journal of Plant Nutrition*, 40(11), 1678–1686.
- Mulyani, T., Fahmi, M., & Wulaningsih, S. (2020). High-dose sulfur fertilizer and early-stage leaf morphogenesis in *Elaeis guineensis*. *Journal of Agronomy*, 19(2), 105–113.
- Murti, S., Hidayat, P., & Nugroho, Y. (2021). Leaf development rate of *Elaeis guineensis* DxP Simalungun under varying nutrient regimes. *Agronomy Review*, 15(3), 200–210.
- Murti, S., Hidayat, R., & Nugroho, Y. (2021). Nutrient supplementation for leaf initiation in oil palm seedlings: A comparative study. *Agronomy Review*, 15(3), 200–210.

- Muslim, M., Sari, D. P., & Prasetyo, B. (2021). Pemanfaatan limbah kulit buah kakao terhadap pertumbuhan tanaman. *Agrovigor: Jurnal Agroekoteknologi*, 14(2), 116–122.
<https://journal.trunojoyo.ac.id/agrovigor/article/download/10205/6012>.
- Novitasari, D., & Caroline, J. (2017). Kajian Efektivitas Pupuk Dari Berbagai Kotoran Sapi, Kambing Dan Ayam
- Nurhafizhoh, Z., Zainuddin, N., Tarmizi, A. H., & Hishamuddin, E. (2019). Effect of biofertiliser containing different percentage rates of chemical fertiliser on oil palm seedlings. *Journal of Oil Palm Research*, 31(3), 456–465.
- Pranata, R., & Kusuma, A. (2021). Role of calcium supplementation in enhancing structural robustness of oil palm seedling stems. *Journal of Plant Nutrition and Soil Science*, 184(3), 332–342.
- Prasetio, A., & Hidayat, M. (2021). Prolonged application of compost and ZA on stem elongation in oil palm pre-nursery. *Journal of Oil Palm Research and Development*, 42(4), 301–313.
- Putra, J., Wibowo, R., & Kurniawan, P. (2019). Temperature and humidity effects on nitrogen uptake in oil palm pre-nursery. *Journal of Tropical Plant Biology*, 30(2), 134–142.
- Putri, T. S., & Marpaung, R. (2022). Light and humidity interaction effects on foliar development of oil palm seedlings. *Indonesian Journal of Plant Ecology*, 8(1), 56–64.
- Qaim, M., Sibhatu, K. T., Siregar, H., & Grass, I. (2020). Environmental, Economic, and Social Consequences of the Oil Palm Boom. *Annual Review of Resource Economics*, 12, 321–344. <https://doi.org/10.1146/annurev-resource-110119-024922>.
- Rahayu, S., Agustina, K., & Djamaludin, M. (2021). Media porosity and nutrient transport in oil palm nursery: Role of calcium. *Journal of Plant Growth Regulation*, 40(3), 987–995.
- Rahman, A., Siregar, E., & Kurniawan, B. (2019). Interactive effects of cocoa pod compost and ZA fertilizer on vegetative growth of oil palm seedlings. *Journal of Tropical Agriculture*, 34(2), 145–156.
- Rahman, F., Mardiana, A., & Hidayah, N. (2023). Manajemen Hara pada Budidaya Kelapa Sawit: Pentingnya Pemupukan Seng & Nitrogen. *Jurnal Ilmu Tanah & Nutrisi Tanaman*, 23(3), 89–102.

- Rahmawati, D., Sari, P., & Kusuma, A. (2020). Sulfotransferase activity and leaf primordia development under sulfate fertilization in oil palm. *Indonesian Journal of Crop Science*, 25(4), 287–295.
- Ramadhani, D., & Sari, I. (2020). Timing of fertilizer application for optimal leaf area in oil palm nursery. *Journal of Agricultural Science and Technology*, 12(2), 89–100.
- Rita, E. (2022). Klasifikasi & Morfologi Tanaman Kelapa Sawit. Diakses dari <https://agrotek.id/klasifikasi-&-morfologi-tanaman-kelapa-sawit/>.
- Ratriyanto, A., Dwi Widyawati, S., Suprayogi, W. P., Prastowo, S., & Widyas, N. (2019). Pembuatan Pupuk Organik Dari Kotoran Ternak Untuk Meningkatkan Produksi Pertanian. 8(1), 9–13. <https://jurnal.uns.ac.id/jurnal-semar>
- Rosnenani, S., Siti, N., & Hidayat, R. (2016). Pengaruh campuran bahan organik dengan tanah mineral terhadap perkembangan tanaman [Effect of organic material mixture with mineral soil on plant development]. *Jurnal Pertanian Tropika*, 32(3), 145–154.
- Santoso, D., Rahma, Z., & Putra, J. (2022). Influence of sulfur-nitrogen fertilizers and organic media on internode elongation of palm oil seedlings. *Journal of Sustainable Agriculture*, 14(2), 89–98.
- Santoso, Y., & Hartati, E. (2018). Enhanced vegetative growth of oil palm seedlings with ZA fertilizer application. *Journal of Oil Palm Research*, 30(1), 45–54.
- Saputra, A., Setiawan, F., & Damayanti, H. (2021). Photosynthetic performance of oil palm seedlings under layered NPK and ZA fertilization. *Plant Production Science*, 24(2), 190–198.
- Sari, L. R., Dewi, F., & Hartono, Y. (2018). Synergistic effects of organic amendment and nitrogen fertilizer on *Elaeis guineensis* height development. *Asian Journal of Plant Sciences*, 17(3), 120–128.
- Sari, R., Hidayah, N., & Putri, D. (2022). Kulit Buah Kakao sebagai Pupuk Organik Berkelanjutan untuk Budidaya Kelapa Sawit: Suatu Tinjauan. *Penelitian Pertanian Berkelanjutan*, 11(1), 34–50.
- Siregar, L., & Utami, D. (2023). Effect of organic compost combined with ZA on stem thickening of oil palm seedlings. *Journal of Plantation Science*, 28(1), 75–84.
- Siregar, L., & Utami, D. (2023). Influence of compost proportion on stem diameter of oil palm seedlings. *Journal of Plantation Science*, 28(1), 75–84.

- Suryadi, T., & Lestari, M. (2020). Sulfur and nitrogen synergism in oil palm seedling growth: Physiological responses. *Agricultural Sciences*, 11(5), 284–294.
- Susanto, A., Widyastuti, R., & Satyawibawa, I. (2017). Solar radiation problem of oil palm cultivation. *IOSR Journal of Agriculture and Veterinary Science*, 14(1), 55–60. ISSN 2319–2380.
- Wang, H., Xu, J., Liu, X., Zhang, D., Li, L., Li, W. (2019). Effects of long-term application of organic fertilizer on improving organic matter content and retarding acidity in red soil from China. *Soil & Tillage Research*, 195, 104382. <https://doi.org/10.1016/j.still.2019.104382> [frontiersin.org](https://www.frontiersin.org).
- Wibowo, Y., Darmawan, F., & Prasetyo, N. (2022). Calcium nutrient supplementation and secondary growth in oil palm nursery. *International Journal of Plantation*, 8(2), 123–130.
- Widowati, L. R., Hartatik, W., & Rachman, A. (2022). Pupuk ZA: Kandungan dan Manfaatnya. Kementerian Pertanian Republik Indonesia
- Wijaya, F., Putri, R., & Santoso, B. (2021). Effects of ZA fertilization on early height growth of *Elaeis guineensis* DxP seedlings. *Journal of Plantation Research*, 43(3), 311–320.
- Wijayanti, S., Nugraha, V., & Hartini, L. (2018). Effect of ammonium nitrate fertilizers on leaf count of oil palm seedlings. *Journal of Plant Growth Regulation*, 37(2), 277–285.
- Yulnafatmawita, & Syarif, A. (2020). Peran sulfur dalam meningkatkan ketersediaan hara dan pertumbuhan tanaman pada tanah masam. *Jurnal Tanah dan Lingkungan*, 22(1), 45–52.
- Yuliani, E., & Prasetyo, D. (2021). Micronutrient-limited expansion of leaf mesophyll in *Elaeis guineensis* under organic amendments. *Agroecosystems*, 14(1), 33–42.
- Yuliani, L., & Prasetya, D. (2022). ZA application and leaf expansion in nursery-grown oil palm. *Journal of Tropical Agriculture*, 39(1), 50–59.
- Yunita, F., & Dharmawan, J. (2021). Micronutrient supplementation for continued leaf production in oil palm pre-nursery. *Journal of Horticultural Research*, 29(3), 215–225.