# DAFTAR PUSTAKA

Ahaduzzaman, M., Milan, L., Morton, C.L., Gerber, P.F., Walkden-Brown, S.W., 2021, Characterization of Poultry House Dust Using Chemometrics and Scanning Electron Microscopy Imaging, *Poult. Sci*, 100, 188.

Aji, D.W., 2018, Penentuan Boron dan Kadmium Pada Pupuk Organik Menggunakan Spektrofotometri di Balai Pengkajian Teknologi Pertanian (BPTP) Yogyakarta, *Lap. Prakt. Kerja Lapangan*, 59.

Aminah, A., 2019, Pengaruh Pupuk Organik terhadap Kesuburan Tanah dan Hasil Pertanian, *J. Agron. dan Kehutan.*, 27, 110–122.

Anshori, M., 2014, Penerapan Teknologi Tepatguna dalam Pertanian untuk Meningkatkan Hasil Panen, *J. Teknol. dan Inov. Pertan.*, 10, 45–59.

Aqilah, P.N., 2023, Analisis Komposit Abu Sekam Padi dan Ekstrak Peptida Rantai Pendek Sebagai Sumber Mikronutrien (Fe, Zn DAN Ni), Departemen Kimia, Universitas Gadjah Mada.

Atique-ur-Rehman., Farooq., Rashid, M., Nadeem, A., Faisal, S., Sabine, A., Folkard, B., Richard, W., Siddique., K.H.M., 2018, Boron nutrition of rice in different production systems. A review, *Agron. Sustain. Dev.*, 38, 14–18.

Badan Pusat Statistik, 2024, Proyeksi Penduduk Indonesia 2020-2050, Jakarta, Indonesia.

Badruzzaman, Juanda, W., Hidayati, Y.A., 2016, Casting Quality Assesment on Vermicomposting of Mixed Feces of Dairy Cattle and Rice Straw, *J. Ilmu Ternak*, 16, 43–48.

Batubara, L. S., Rozaini, N., 2023, Pengaruh Produksi Beras , Harga Beras dan Konsumsi Beras Terhadap Impor Beras di Provinsi Sumatera Utara Tahun 2009-2019, *Transform. J. Econ. Bus. Manag.*, 3, 13–22.

Benício, L.P., 2022, Overview of the Use of Phosphate Fertilizers in Brazil, a Review, *Agri-Environmental Sci.*, 8, 12.

Berzelius, J., 1893, Lehrbuch der Chemie, Third Edit. Berzelius, J., Arnoldische Bucchandlung, Leipzig.

Billingham, K., 2015, Humic Products Potential or Presumption For Agriculture, NSW Agriculture, Nordstrom.

Black, R. E., Victora, C.g., Walker, S. P., Bhutta, Z. A., Christian, P., De Onis, M., Uauy, R., 2013, Maternal and Child Undernutrition and Overweight in Low-Income and Middle-Income Countries, *Lancet*, 382, 427–451.

Bolan, N. S., 2023, Nutrient Management for Sustainable Agriculture: Advances and Challenges, *Soil Sci. Plant Nutr.*, 69, 15–34.

Bouray, M., Moir, J. L., Lehto, N. J., Condron, L. M., Touhami, D., Hummel, C., 2021, Soil pH Effects on Phosphorus Mobilization in The Rhizosphere of Lupinus Angustifolius, *Plant Soil*, 469, 387–407.

Brandelli, A, Daroit, D.J, Riffel, A., 2010, Biochemical Features of Microbial

Keratinases and Their Production and Application, *Appl. Microbiol Biotechnol*, 85, 1735–1750.

Buhler, A., Stutz, M., Schmid, A., 2021, Keratin-Based Materials from Chicken Feathers: Properties and Applications, *J. Mater. Sci.*, 56, 6789–6803.

Cakmak, I., McLaughlin, M. J., White, P., 2017, Zinc for Better Crop Production and Human Health, *Plant Soil*, 411, 1–4.

Cao, X., Liu, J., Zhu, L., Wang, S., Liu, G., Yang., 2017, Characterization of Phosphorus Sorption on The Sediments of Yangtze River Estuary and Its Adjacent Areas, *Mar. Pollut. Bull.*, 144, 277–284.

Cendana, N., 2022, Analisis N, P Dan K Pada Pupuk Organik Cair Dari Feses Sapi Dan Variasi Perbandingan Massa Antara Daun Gamal Dan Daun Lamtoro, *Semin. Nas. Kim. Dan Pendidik. Kim. I Univ. Nusa Cendana*, 108–117.

Charlina, C., 2015, Karakterisasi Fraksi Humin, Asam humat, dan Asam Fulvat Pada CRH (Carbonized Rice Husk) dan Humus Sintesis., Departemen Kimia, Universitas Gadjah Mada.

Chowdhury, S.N., Hossain, S., Sagervanshi, A., Pitann, B., 2024, pH Stabilized -$NH^{4+}$ Fed Nutrition Promotes Higher B Uptake and Plant Growth in Rapeseed ( Brassica napus L .) by the Upregulation of B Transporters, *J. Plant Growth Regul.*, 43, 3594–3608.

Christman, R. F., Gjessing, E. T., 1983, The Influence of Soil pH on Nutrient Availability, *J. Soil Water Conserv.*, 38, 145–152.

Condron, L. M., Turner, B. L., Cade-Menun, B. J., 2005, Chemistry and Dynamics of Soil Organic Phosphorus, *Phosphorus Agric. Env.*, 46, 87–121.

Darmawan, T.C., 2020, Hubungan Pola Nutrisi dengan Kejadian Stunting pada Balita Madura, *J. Keperawatan*, 40, 1–7.

Darubekti, N., Hanum, S.H., 2023, Kelaparan Tersembunyi pada Anak dengan Berat Badan Kurang di Pedesaan Pesisir, *J. Muara Ilmu Sos. Humaniora, dan Seni*, 7, 33–41.

Ding, Y., 2024, Advancements in Soil Fertility Management for Enhanced Agricultural Productivity, *Agric. Res. Technol.*, 39, 77–92.

Emilia, E., 2009, Pendidikan Gizi Sebagai Salah Satu Sarana Perubahan Perilaku Gizi Pada Remaja, *J. Tabularasa Pps Unimed*, 6, 161–174.

Engelstad, O.P., 1997, Teknologi Dan Penggunaan Pupuk, Gadjah Mada University (ed) Press, Yogyakarta.

Eviati., Sulaeman., Lenita, H., Linca A., Usman., Hesti, E. T., Rini., P.W., 2023, Analisis Kimia Tanah, Tanaman, Air, Dan Pupuk, 3th ed. Sipahutar, A.I., Wibowo, H., Siregar, A.F., Widowati, L.R., And Rostaman, T. (ed) Kementerian Pertanian Republik Indonesia, Bogor.

Firmantianingrum, E.J., 2014, Humin Sintesis sebagai Penangkap dan Penyimpan Karbon dan Nitrogen serta sebagai Solusi Pengurangan Emisi Gas Rumah Kaca Sektor Pertanian, Departemen Kimia, Universitas Gadjah Mada.

Funke, A., Ziegler, F., 2010, Hydrothermal Carbonization of Biomass: A Summary and Analysis of the Technical Literature, *Biofuels, Bioprod. Biorefining*, 4, 160–177.

Ghorbani, R., 2018, Impact of Organic and Inorganic Amendments on Soil Health and Crop Productivity, *J. Soil Sci. Plant Nutr.*, 18, 485–496.

Goldberg, S., 2014, Soil Chemical Processes and Environmental Implications, CRC Press (ed) CRC Press, Boca Raton.

Goudia., Bachir, D., Tom, C., 2015, Breeding for high grain Fe and Zn levels in cereals, *Int. J. Innov. Appl. Stud. ISSN*, 12, 2028–9324.

Han, X., Ding, S., Lu, J., Li, Y., 2022, Global, Regional, And National Burdens Of Common Micronutrient Deficiencies From 1990 To 2019, A Secondary Trend Analysis Based On The Global Burden Of Disease 2019 Study, *Eclinical Med.*, 44, 1–9.

Handayani, M., Sulistiyono, E., 2009, Uji Persamaan Langmuir Dan Freundlich Pada Penyerapan Limbah Chrom (Vi) Oleh Zeolit,. In, *Prosiding Seminar Nasional Sains dan Teknologi Nuklir PTNBR – BATAN.*, pp. 130–136.

Hartatik, W., Husnain, H., And Widowati, L.R., 2015, Peranan Pupuk Organik dalam Peningkatan Produktivitas Tanah dan Tanaman, *J. Sumberd. Lahan*, 107–120.

Haurowitz, F., 1984, Biochemistry of Soil and Plant Interactions, Academic Press (ed) Academic Press, New York.

Hayes, M.H.B., Swift, R.S., Byrne, C.M., Song,G, And Simpson, A.J., 2010, The Isolation And Chacterization Of Humic Substances And Humin From Grey Brown Podzolic And Gley Grassland Soils 19th World Congress Of Soil Science, Brisbane.

Herrera-Rodriguez M.B., Gonzalez-Fontes A., Rexach J., Camacho-Cristobal J.J., Maldonado J.M., N.M.T., 2010, Role of Boron in Vascular Plants and Response Mechanisms to Boron Stresses, *Plant Stress*, 4, 115–122.

Huang, Y., Wang, H., Zheng, M., 2018, Hydrothermal Carbonization of Biomass, *Renew. Sustain. Energy Rev.*, 82, 1242–1254.

Ilham N., Mustamu N.E., Dalimunthe B.A., Saragih S.H.Y., 2023, Aplikasi Pemberian Abu Sekam Padi dan Pupuk Organik Cair (POC) Terhadap Produksi Tanaman Cabai Merah (Capsicum annum L.), *J. Mhs. Agroteknologi*, 4, 57–60.

Iqbal, M.K., 2017, Soil Nutrient Management for Sustainable Crop Yield, *Soil Sci. Plant Nutr.*, 45, 400–415.

Janos, P., 2003, Separation Methods In The Chemistry Of Humic Substances, *J. Chromatogr.*, 983, 1–18.

Javaid, T., Farooq, M.A., Akhtar, J., Saqib, Z.A. Anwar-ul-Haq, M., 2019, Silicon Nutrition Improvesgrowth Of Salt Stressed Wheat By Modulating Flows And Portioning Of $Na^+$ $Cl^-$ And Mineral Ions, *Plant Physiol. Biochem*, 14, 291–299.

Kaptan, K., 2015, The Role of Organic Fertilizers in Improving Soil Structure and Crop Yield, *J. Sustain. Agric.*, 27, 145–158.

Karim, B.K., Tsamarah, D.F., Zahira, A., Rosandi, N.F., Swarga, K.F., Aulifa, D.L., Elaine, A.A., Sitinjak, B.D.P., 2024, In-Silico Study of Active Compounds in Guava Leaves ( Psidium guajava L .) as Candidates for Breast Anticancer Drugs Studi In-Silico Senyawa Aktif Daun Jambu Biji ( Psidium guajava L .) sebagai,3, 194–209.

Katyal, J.C., Randhawa, N. S., 1983, Micronutrients FAO Fertilizer and Plant Nutrition Bulletin, Service,F. P.N. (ed) Indian Council of Agricultural Research, New Delhi, India.

Kaur, G., 2020, Automated Nutrient Deficiency Detection In Plants Palarch's, *J. Archaeol. Egypt/Egyptology*, 17, 5894–5901.

Kementerian Kesehatan Republik Indonesia, 2022, Buku Saku Hasil Studi Status Gizi Indonesia (SSGI) Tahun 2022, In Kemenkes RI, Jakarta, Indonesia.

Khan, S.A., Khan, S.U., Qayyum, A.R., Gurmani, A., Khan, S.M., Khan, W., Ahmed, A., Mehmood, Amin A.Z., 2019, Integration Of Humic Acid With Nitrogen Wields An Auxiliary Impact On Physiological Traits,Growth And Yield Of Maize (Zea Mays L.) Verities, *Appl. Ecol. Environ. Res*, 17, 6783–6799.

Kihara, J., Bolo, P., Kinyua, M., Rurinda, J., Piikki, K., 2020, Micronutrient Deficiencies in African Soils and The Human Nutritional Nexus: Opportunities With Staple Crops, *Environ. Geochem. Health*, 42, 3015–3033.

Kumari, M. Kumar, J., 2020, Chicken Feather Waste Degradation By Alternaria Tenuissima And Its Application On Plant Growth, *J. Appl. Nat. Sci.*, 12, 411–414.

Kuncaka, A., 2015, Humus Sintetis/Pupuk SROP sebagai Mesin Penjerap Carbon (Modeling Adsorpsi Glukosa),. In, PPS UNDIP (ed), *Proceeding Seminar Nasional Hasil-Hasil Penelitian Pascasarjana, PPS UNDIP*. PPS UNDIP, Semarang.

Kuncaka, A., 2014, Metode Memproduksi Pupuk Organik Paramagnetik Pelepasan Lambat (Pupuk Slow Release Organic Paramagnetic/Pupuk SROP),. In, *Direktorat Jenderal Hak Kekayaan Intelektual, Kementerian Hukum dan Hak Asasi Manusia Republik Indonesia, No. Pendaftaran Paten P00201401530.*

Kuncaka, A., 2023, Metode Pembuatan Pembenah Tanah Abu Sekam-Kalsium-Kalium-Proteinat-Fosfat, Paten Indonesia.

Kurniawan, B., Syafii, A., 2022, Pengaruh Pupuk Organik terhadap Produktivitas Tanaman Pangan, *J. Agrik. Indones.*, 34, 76–88.

Kurniawan, T.W., Panjaitan, S.D., Sitorus, B., 2016, Kinetics And Adsorption Isotherm Modelling Of Mercury Ion Using Activated Carbon From Palm Empty Fruit Bunches, *Orbital*, 1, 59–79.

Kusuma, I., And Yanti, I, ., 2022, Pengaruh Kadar Air dalam Tanah Terhadap Kadar C-Organik dan Keasaman (pH) Tanah, *Indones. J. Chem. Res.*, 6, 92–

97.

Lee, J., Hong, J., Jang, D., Park, K. Y., 2019, Hydrothermal Carbonization of Waste From Leather Processing and Feasibility of Produced Hydrochar As An Alternative Solid Fuel, *J. Environ. Manag.*, 115–120.

Lehmann, J., Joseph, S., 2015, Biochar for Environmental Management: Science, Technology and Implementation, *Earthscan from Routledge*, 1–976.

Lehmann, J., 2009, Terra Preta de Indio, *Encyc. Soil Sci*, 1, 1–4.

Liu, J., 2022, Advances in Sustainable Agriculture through Soil Fertility Management, *J. Soil Sci. Plant Nutr.*, 22, 301–315.

Loya, R., Rambu,P., N.R., 2017, Pola Asuh Pemberian Makan Pada Bayi Stunting Usia 6-12 Bulan di Kabupaten Sumba Tengah, Nusa Tenggara Timur, *J. Nutr. Coll.*, 6, 84.

Mao, X., 2018, Soil Amendments and Their Effect on Agricultural Productivity, *Agric. Sci.*, 29, 189–204.

Maslukah, L. Zainuri, M., Wirasatriya, A., Widiaratih, R., 2020, Studi Kinetika Adsorpsi Dan Desorpsi Ion Fosfat Di Sedimen Perairan Semarang Dan Jepara, *J. Ilmu dan Teknol. Kelaut. Trop.*, 12, 385–396.

Masood, A., 2022, Nutrient Management Strategies for Improved Crop Yield, *Plant Soil*, 475, 67–81.

Mautuka Z.A., Maifa A., K., 2022, Pemanfaatan Biochar Tongkol Jagungguna Perbaikan Sifat Kimia Tanah Lahan Kering, *J. Ilm. Wahana Pendidik.*, 8, 201–205.

Meyer, M.L., Bloom, P.R., 1997, Boric and Silicic Acid Adsorption and Desorption by a Humic Acid, *J. Environ. Qual.*, 26, 63–69.

Mihajlovic, R., Kalhevic, M., Vukasinovic., 2007, Spectrophotometric Method for The Determination of Phosphorus in Natural Waters Using The Bismuth-Phosphomolybdate Complex, *Water SA.*, 33 (4), 513-517.

Mohinuzzaman, M., Yuan, J., Yang, X., Senesi, N., Li, S.L., Ellam, R.M., Mostofa, K.M.G., Liu, C.., 2020, Insights Into Solubility Of Soil Humic Substances And Their Fluorescence Characterisation In Three Characteristic Soils, *Sci. Total Env.*, 720, 1–14.

Mujahid, A., 2021, Impact of Fertilizer Use on Soil Health and Crop Productivity, *J. Agric. Sci.*, 29, 123–135.

Mujiyanti, D.R., H. Nisa., K. Rosyidah., D.A. A., 2020, Pengaruh Waktu Reaksi Terhadap Viskositas Dan Densitas Dimerkaptosilika Dari Silika Abu Sekam Padi, *Indones. J. Chem. Res.*, 8, 72–78.

Mukhlis, 2014, Analisis Tanah Tanaman, Kedua Edit. USU Press (ed) USU Press, Medan.

Nayya, V. K, Arora, C. L, Kataki, P.K., 2001, Management Of Soil Micronutrient Deficiencies In The Rice-Wheat Cropping System, *J. Crop Prod*, 4, 87–131.

Ningrum, N.P., Hidayatunnikmah, N., Rihardini, T., 2020, Cegah Stunting Sejak Dini dengan Makanan Bergizi untuk Ibu Hamil, *E-DIMAS J. Pengabdi. Kpd. Masy.*, 11, 550–555.

Ninu, Y.D., Bausele, A.B., 2023, Adsorpsi Metilen Biru Menggunakan Biosorben Sabut Kelapa Teraktivasi Kalium Hidroksida, *Teraktivasi Kalium Hidroksida. SPIN-Jurnal Kim. Pendidik. Kim.*, 5, 50–66.

Nor, M.M., 2014, The Effect of Organic and Inorganic Fertilizers on Crop Production, *J. Agric. Sci. Technol.*, 19, 345–358.

Olo, A., Mediani, H. S., Rakhmawati, W., 2021, Hubungan Faktor Air dan Sanitasi dengan Kejadian Stunting pada Balita di Indonesia, *J. Pendidik. Anak Usia Dini*, 5, 1113–1126.

Otiti, M. I., And Allen, S.J., 2021, Severe Acute Malnutrition In Low- And Middle-Income Countries, *Paediatr. Child Health (Oxford).*, 31, 301–307.

Pardiansyah P, 2013, Kajian Pemanfaatan Limbah Bulu Ayam Sebagai Bahan Pembuatan Kompos, Universitas Bangka Belitung, Balunijuk.

Permentan, 2009, Standar Baku Mutu Pupuk Organik No. 28 Tahun 2019,21–23.

Piccolo, A., Conte, P., 1999, Conformational Arrangement of Dissolved Humic Substances and Influence of Solution Composition on Association of Humic Molecules, *Environ. Sci. Technol*, 33, 1682–1690.

Piccolo, A., 2001, The Supramolecular Structure of Humic Substances, *Soil Sci.*, 166, 810–832.

Prasetyo, A., Utami, Y., Sari, D., 2021, Environmental Impact of Rice Husk Ash Utilization, *Int. J. Environ. Sci.*, 10, 90–102.

Puastuti, W., Mathius, I. W., 2007, Pengembangan Teknologi Pakan Ternak Berbasis Sumber Daya Lokal, *J. Ilmu Peternak. Indones.*, 12, 9–11.

Puja, I.N. Atmaja, I.D.A., 2018, Kajian Status Kesuburan Tanah untuk Menentukan Pemupukan Spesifik Lokasi Tanaman Padi, *Agrotrop*, 8, 1–10.

Putra, R.E., Rayes, M.L., Kurniawan, S., 2024, Pengaruh Kombinasi Pupuk Organik dan Anorganik terhadap Sifat Fisik dan Kimia Tanah serta Produksi Padi pada Lahan Kering yang Disawahkan, *J. Agrik. Indones.*, 35, 136–150.

Putra, R., 2018, Peningkatan Produktivitas Lahan melalui Inovasi Pertanian Organik, *J. Agroekoteknologi*, 27, 205–215.

Quang, A., Naeem, A., Sagervanshi, A., Wimmer, M.A., Mühling, K.H., 2021, Plant Physiology and Biochemistry Boron Uptake and Distribution by Oilseed Rape ( Brassica napus L) as Affected by Different Nitrogen Forms Under Low and High Boron Supply, *Plant Physiol. Biochem.*, 161, 156–165.

Rahman, S. Mehta, S., Husen, A., 2024, Use of Amino Acids in Plant Growth, Photosynthetic Assimilation, and Nutrient Availability, *Plant Biol. Sustain. Clim. Chang.*, 10, 117–127.

Rehman, A., Farooq, M., Rashid, A., Nadeem, F., Stuerz, S., Asch, F., Bell, R. W., Siddique, K.H.M., 2018, Boron Nutrition Of Rice In Different Production

Systems, *Agron Sustain Dev*, 38, 25.

Rerkasem, B., Jamjod, S., 2004, Boron Deficiency in Wheat, *F. Crop. Res*, 89, 173–186.

Rohrdanz, M., Rebling, T., Ohlert, J., Jasper, J., Greve, T., Buchwald, R., Frieling, P.V., Wark, M., 2016, Hydrothermal Carbonization of Biomass from Landscape Management-Influence of Process Parameters on Soil Properties of Hydrochars, *J. Environ. Manag.*, 173, 72–78.

Rosmarkam dan Yuwono, 2002, Ilmu Kesuburan Tanah, Kanisius (ed) Kanisius, Jakarta.

Sagar, R., 2020, Sustainable Agriculture: Practices and Innovations for Improving Soil Health, *J. Agric. Sci. Technol.*, 22, 567–580.

Sahfitra, A.A., 2023, The Variation of Cation Exchange Capacity (CEC) and Base Saturation (BS) in Hemic Haplosaprists Soil Influenced by Tidal in Pelalawan Riau, *BIOFARM J. Ilm. Pertan.*, 19, 103–112.

Salvestrini, G., 2023, Advances in Soil Chemistry and Environmental Remediation, *Environ. Sci. Technol.*, 57, 2100–2115.

Sarah, A., 2024, Climate Change and Its Impact on Agricultural Productivity, *J. Environ. Sci. Policy*, 36, 78–94.

Saravanan, K., Dhurai, B., 2012, Exploration On Amino Acid Content And Morphological Structure In Chicken Feather Fiber, *J. Text. Apparel, Technol. Manag.*, 7, 1–6.

Sari, J.R., Mansyur, S., Nugroho, A.P., Sukandaru, F.., 2024, Pemanfaatan Limbah Abus Sekam Padi dalam Peningkatan Ekonomi Masyarakat Desa Kemudo Kecamatan Prambanan, *BERNAS*, 5, 857–860.

Savitri, L.N., 2019, Desorpsi Ion Kalsium Dari Humus Sintesis Hasil Karbonisasi Hidrotermal (HTC) Limbah Bulu Ayam, Chemistry, Universitas Gadjah Mada.

Setiawati, M.R.,Rachelita, N., Fitriatin, B, N., Nurbaity, A., Yuniarti, A., Suryatmana, P., Hindersah, R., 2023, Pengaruh Pemberian Asam Humat, Asam Fulvat, dan Pupuk Hayati pada Media Tanam terhadap Beberapa Sifat Kimia Tanah, Hasil, dan Kualitas Buah Stroberi (Fragaria ananassa), *Agrikultura*, 34, 255.

Shand, C., 2007, Plant Nutrition for Food Security. A Guide for Integrated Nutrient Management . By R. N. Roy, A. Finck, G. J. Blair H. L. S. Tandon. Rome: Food and Agriculture Organization of the United Nations (2006), pp. 348, US $70.00. ISBN 92-5-105490-8 ,.

Simajuntak, D.S.S., Hendrawan, B., 2022, Analysis Of Soil Chemical Characteristics In Pabatu Serdang Bedagai Unit Oil Palm Plantations, *J. Agric.*, 1, 4–8.

Smejkalova, D. Piccolo, A., 2008, Host-Guest Interactions between 2,4-Dichlorophenol and Humic Substance as Evaluated by H-NMR Relaxation and Diffusion Ordered Spectroscopy, *Environ. Sci. Technol*, 42, 699–706.

Stevenson, F.J., 1994, Humus Chemistry Genesis Composition Reaction, 2nd ed. Wiley, New York.

Stratmann, B., 2023, Innovations in Sustainable Agriculture: A Focus on Soil Nutrient Management, *J. Agric. Sustain.*, 18, 125–142.

Sudiono, S., Yuniarti, M., Siswanta, D., Kunarti, E.S., Triyono., Santosa, S.J., 2017, The Role of Carboxyl and Hydroxyl Groups of Humic Acid in Removing $AuCl^{4-}$ from Aqueous Solution, *Indones. J. Chem.*, 17, 95–104.

Sugianto, A., 2021, Analisis Kebijakan Pencegahan Dan Penanggulangan Stunting Di Indonesia, *J. Ekon. Manajemen, Bisnis dan Sos.*, Vol. 1, Halaman 197-209.

Suryani, I., 2014, Kapasitas Tukar Kation (KTK) Berbagai Kedalaman Tanah Pada Areal Konversi Lahan Hutan, *J. Agrisistem*, 10, 99–106.

Suwardi., Wijaya, H., 2013, Peningkatan Produksi Tanaman Pangan dengan Bahan Aktif Asam Humat dengan Zeolit sebagai Pembawa, *J. Ilmu Pertan. Indones.*, 18, 79–84.

Tan, K.., 2013, Humic Matter in Soil and Environtment: Principles and Controversies, 2nd ed. CRC Press (ed) CRC Press, Florida.

Tan, K.H., 1997, Principles of Soil Chemistry, 3rd Editio. Marcel Dekker Inc (ed) Marcel Dekker Inc, New York.

Titaley, C. R., Ariawan, I., Hapsari, D., Muasyaroh, A., Dibley, M.J., 2019, Determinants Of The Stunting Of Children Under Two Years Old In Indonesia: A Multilevel Analysis Of The 2013 Indonesia Basic Health Survey, *Nutrients*, 11, 1106.

Trisnawati, A., 2022, Analisis Status Kesuburan Tanah Pada Kebun Petani Desa Ladogahar Kecamatan Nita Kabupaten Sikka, *J. Locus Penelit. dan Pengabdi.*, 1, 68–80.

Urrutia, R., 2014, Dampak Lingkungan Penggunaan Pupuk Fosfat pada Tanah Pertanian, *Agric. Environ. Res.*, 22, 321–335.

Varol, M., 2023, Kandungan Boron di Tanah Pertanian: Studi Perbandingan dengan Rata-Rata Global, *Environ. Monit. Assess.*, 195, 455–468.

Vetterlein, D., Kuhn, T., Kaiser, K., Jahn, R., 2013, Illite Transformation and Potassium Release upon Changes in Composition of the Rhizophere Soil Solution, *Plant Soil*, 371, 267–279.

Wahyudi, I., 2007, Peran Asam Humat dan Fulvat Dari Kompos Dalam Detoksifikasi Aluminium Pada Tanah Masam, *Buana Sains*, 7, 123–130.

Wang, J., Liang, J., 2014, Pengaruh Pemberian Fosfor terhadap Desorpsi dan Ketersediaan Fosfor di Tanah, *J. Soil Sci. Plant Nutr.*, 14, 567–578.

Wang, Y., Zhang, L., Li, H., 2022, Application of Chicken Feather Meal in Organic Agriculture, *Agric. Sci.*, 13, 265–275.

Wang, S.E., 2020, What is the Role of Amino Acids in Human Body, *Gene Technol.*, 9, 3–4.

Wasay, S. A., Barrington, S. F., Tokunaga, S., 1998, Remediation of Soils Polluted by Heavy Metals Using Salts of Organic Acids and Chelating Agents, *Environ. Technol*, 19, 369–379.

WHO, 2012, WHA Global Nutrition Targets 2025, Geneva.

Winahyuningrum, D.P., 2019, Peningkatan Child Stunting Di India Tahun 2014-2017, E-Sospol., 6(2), 1-13.,.

Wingrove. A. S., Caret, R.L., 1981, Organic Chemistry, Harper and Row, New York.

Yang, F., Tang, C., Antonietti, M., 2021, Natural and Artificial Humic Substances to Manage Minerals, Ions, Water, and Soil Microorganisms, *Chem. Soc. Rev.*, 50, 6221–6239.

Yang, F., Zhang, S., Cheng, K., Antonietti, M., 2019, Proses Hidrotermal Untuk Mengubah Biomassa Limbah Menjadi Asam Fulvik dan Humat Buatan Untuk Perbaikan Tanah,1140–1151.

Yang, F., Zhang, S., Cheng, K., Antonietti, M., 2013, A Hydrothermal Process To Turn Waste Biomass Into Artificial Fulvic And Humic Acids For Soil Remediation, *Sci. Total Env.*, 686, 1140–1151.

Yang, F., Zhang, S., Song, J., Du, Q., Li, G., Tarakina, N. V., Antonietti, M., 2019, Synthetic Humic Acids Solubilize Otherwise Insoluble Phosphates to Improve Soil Fertility, *Angew. Chemie - Int. Ed.*, 58, 18813–18816.

Zainuddin, Z., Zuraida, Z., Jufri, Y., 2020, Evaluasi Ketersediaan Unsur Hara Fosfor (P) pada Lahan Sawah Intensif Kecamatan Sukamakmur Kabupaten Aceh Besar, *J. Ilm. Mhs. Pertan.*, 4, 603–609.

Zakiyah., Zahrah, N.R., Cicik, F., 2019, Analysis Of Phosphorus And Potassium Levels In Organic Fertilizer In The Integrated Laboratory Of Jombang District Agriculture Office, *Indones. J. Chem. Res.*, 3, 38–48.

Zhou, Y., 2019, Hydrothermal Carbonization Of Biomass Effects Of Reaction Conditions On The Properties Of Hydrochar, *Bioresour. Technol.*, 292, 121.