DAFTAR PUSTAKA

Abakumov, E. V., Rodina, O. A., & Eskov, A. K. (2018). *Humification and Humic Acid Composition of Suspended Soil in Oligotrophous Environments in South Vietnam. Applied and Environmental Soil Science, 2018, 1–8.*doi:10.1155/2018/1026237

Alimin, N., S. J. Santoso, dan S. Noegrohati. 2005. Fraksinasi Asam Humat dan Pengaruhnya pada Kelarutan Ion Logam Seng (II) dan Kadmium (II). Jurnal Ilmu Dasar Vol. 6 No. 1

Anda, M., J. Shamshuddin, C. I. Fauziah and S.R. S. Omar. 2010. Increasing theorganic matter content of an Oxisolusing rice husk compost: changes indecomposition and its chemistry. SoilSci. Soc. Am. J. 74:1167–1180.

Andreux, F. (1996) Humus in World Soils. In: Piccolo, A., Ed., Humic Substances in Terrestrial Ecosystems, Elsevier, Amsterdam, 45-100. http://dx.doi.org/10.1016/B978-044481516-3/50003-7

Ariani, S. 2003. Peranan Thricoderma harzianum Terhadap Kecepatan Dekomposisi Berbagai Sumber Bahan Organik dan Kualitas Kompos yang Dihasilkannya. Skripsi Sarjana Pertanian Unversitas Andalas. Padang

Aruan, A. 2004. Meningkatkan Daya Tarik Investasi dan Peluang Pasar Hutan Tanaman di Era Desentralisasi.Prosiding Seminar Ilmiah Hasil-hasil Penelitian. BalaiPenelitian dan Pengembangan Hutan TanamanIndonesia Bagian Timur. Pusat Penelitian danPengembangan Bioteknologi dan Pemuliaan Tanaman Hutan, Yogyakarta.

Bargali, Shukla K, Singh L, Ghosh L, Lakhera ML. 2015. Leaf Litter Decomposition and Nutrien Dynamics in Four Tree Species of Dry Deciduous Forest. Tropical Ecology 56(2):191–200.

Bot, A., dan J. Benitez. 2005. The importance of soil organic matterKey to drought-resistant soil and sustained food and production. FAOSoilsBulletin80. Food and Agriculture Organization oh The United NationsRome, 2005

Broos, K. and Baldock, J. 2008 Building Soil Carbon for Productivity and Implications for Carbon Accounting. 2008 South Australian GRDC Grains Research Update.

Chang, R.R.; Mylotte, R.; Hayes, M.H.B.; McIerney, R.; Tzou, Y.M. 2014. A comparison of compositional differences between humic fractions isolated by the IHSS and exhaustive extraction procedures. Naturwissenschaften 101: 197-209.

Chen, Y., N. Senesi, and M. Schnitzer. 1977. Information Provided on Humic Substances by E4/E6 ratios. Soil Sci. Soc. Am. J. 41:352-358.

Danise, T., Fioretto, A., & Innangi, M. (2018). Spectrophotometric methods for lignin and cellulose in forest soils as predictors for humic substances. *European Journal of Soil Science*, *69*(5), 856–867. https://doi.org/10.1111/ejss.12678

Edwin, Mulia. 2016. Penilaian Stok Karbon Tanah Organik Pada BeberapaTipe Penggunaan Lahan di Kutai Timur,Kalimantan Timur. Jurnal AGRIFOR Volume XV Nomor 2, Oktober 2016

Ermadani, Hermansah Y. 2018. Dynamics of Soil Organic Carbon Fractions Under, 26–39.

Eshwar, M., Srilatha, M., Rekha, K. B., & Sharma, S. H. K. (2017). Characterization of Humic Substances by Functional Groups and Spectroscopic Methods. *International Journal of Current Microbiology and Applied Sciences*, *6*(10), 1768–1774. https://doi.org/10.20546/ijcmas.2017.610.213

Evizal, R., Tohari, I.D. Prijambada, J. Widada, F.E. Prasmatiwi, Afandi. 2010. Pengaruh Tipe Agroekosistem Terhadap Produktivitas dan Keberlanjutan Usaha Tani Kopi. JurnalAgrotropika 15: 17-22.

Evizal, R., Tohari, I.D. Prijambada, dan J. Widada. 2012. Peranan Serasah Terhadap Sumbangan N dan P padaAgroekosistem Kopi. AGROTROP, 2(2): 177-183 (2012)

Ewusie, J.Y. 1990. Ekologi Tropika. Penerbit ITB. Bandung

Gerson, ND., 2007. *Kondisi Tanah Pada SistemKaliwu dan Mawar*. Info HutanVol. 5,No.1, Hal 45-51.

Glinski, J. and W. Stepniewski. 1985. Soil aeration and its role for plants, Fl., CRC Press, Boca Raton.

Guggenberger, George. 2005. Humification andMineralization in Soils. Soil Biology, Volume 3 Microorganisms in Soils: Roles in Genesis and Functions (ed. by F. Buscot and A. Varma) c Springer-Verlag Berlin Heidelberg 2005

Hairiah, K., Widianto, Suprayoga, D., Widodo, R. H., Purnomosidi, P., Rahayu, S., dan Noordwijk, V. 2004. Ketebalan Seresah Sebagai Indikator Daerah Aliran Sungai (DAS) Sehat. World Agroforestry Centre (ICRAF). Malang: Unibraw

Hanafiah, K.A. 2014. Dasar-dasar Ilmu Tanah. Jakarta: Rajawali Press

Hardjowigeno, Sarwono. 2016. Klasifikasi Tanah dan Pedogenesis. Akademika Pressindo. Bekasi.

Hani, Aditya dan Suryanto, Priyono. 2014. Dinamika Agroforestri Tegalan di Perbuktian Menoreh, Kulon Progo, Daerah Istimewa Yogyakarta.Jurnal Penelitian Kehutanan WallaceaVol. 3 No.2, Juni 2014: 119 - 128

Hayes, M. H. B., and R. L. Malcolm. 2001. Considerations of Compositions and Aspects of the Structures of Humic Substances. Pp.3-39. In: Humic Substances andChemical Contaminants, C. E. Clapp, M. H. B. Hayes, N. Senesi, P. R. Bloom, and P. M. Jardine (eds.). Proc. Workshop and Symposium Int. Humic Substances Soc., Soil Sci. Soc. Am., and Am. Soc. Agronomy, Anaheim, CA, 26-27 Oct., 1997. Soil Sci. Soc. Am., Inc., Madison, WI.

Hedges, J. I. 1988. Polymerization of Humic Substances in Natural Environments. Pp.45-57. In: Humic Substances and their Role in the Environment, F. H. Frimmel and R. F. Christman (eds.). Report Dahlem Workshop on Humic Substances and their Role in the Environment, Berlin 1987, March 29 - April 3. Wiley Interscience, New York

Hodkinson, I. D. 2005. Terrestrial insects along elevation gradients: species andcommunity responses. Biological Review 80, 489-513.

Ilham Bakri, Abdul Rahim Thaha, dan Isrun.2016. Status BeberapaSifat Kimia Tanah pada Berbagai Penggunaan Lahan di DAS PoboyaKecamatan Palu Selatan. e-J. Agrotekbis 4 (1) :16-23, Februari 2016

Irawan, A., dan June T. 2013. Hubungan Iklim Mikro dan Bahan Organik Tanah dengan Emisi CO2 dari Permukaan Tanah di Hutan Alam Babahaleka Taman Nasional Lore Lindu, Sulawesi Tengah. Jurnal Agromet Indonesia 25:21-31.

J. N. F. I. A. Putra, M., Soemarno, S., & Suntari, R. 2016. Humification degree and its relationship with some soil physical characteristics on robusta coffee (Coffea canephora) plantation. *Journal of Degraded and Mining Lands Management*, *3*(4), 649–658. https://doi.org/10.15243/jdmlm.2016.034.649

Juarti. 2016. Analisis Indeks Kualitas Tanah Andisol pada Berbagai Penggunaan Lahan di Desa Sumber Brantas Kota Batu. JURNAL PENDIDIKAN GEOGRAFI: Kajian, Teori, dan Praktek dalam Bidang Pendidikan dan Ilmu Geografi Tahun 21, No. 2, Juni 2016 Halaman: 131-144

Juhadi. 2007. Pola-pola Pemanfaatan Lahan dan Degradasi Lingkungan pada Kawasan Perbukitan. Jurnal Geografi Volume 4 No.1 Januari 2007

Kartasapoetra dan Mul Mulyani Sutedjo. 2010. Teknologi Konservasi Tanah dan Air Edisi Kedua. Rineka Cipta. Jakarta

Keller, J., P. Weisenhorn and J. Megonigal. 2009. Humicacids as electron acceptors in wetland decomposition.Soil Biol. Biochem. 41: 1518-1522.

Kizilikaya R., Orhan D. 2010. *Variation of landuse and land cover effects onsome soilphysico-chemical characteristics and soilenzyme activity*. ZemdirbysteAgriculture.vol.97, No2, p.15-24

Kögel-Knabner, I., Wolfgang, W. & Hatcher, P.G. 1988. Chemical composition of the organic matter in forest soils: the humus layer. Journal of PlantNutrition and Soil Science, 151, 331–340.

Kononova, M. M.1966. Soil Organic Matter. Pergamon Press, Elmsford, NY. M.

Lal, R. 2005. Soil Carbon Sequestration in Natural and Managed Tropical Forest Ecosystem. Journal of Sustainable Forestry 21, 1-30.

Lehmann, J. & Kleber, M. 2015. The contentious nature of soil organicmatter. Nature, 528, 60–68.

Mamani-Pati, F., D.E. Clay, S.A. Clay, H.Smeltekop, and M.A. Yujra-Callata.2012. The Influence of Strata on theNutrient Recycling within a TropicalCertified Organic Coffee ProductionSystem. International Scholarly ResearchNetwork ISRN Agronomy. doi:10.5402/2012/389290.

Marie-Madeleine Coteaux, Pierre Bottner and Bjorn Berg. 1995. Litter Decomposition, Climate and Litter Quality. Tree Vol. 2 No. 10 February 1995

Mrozik, A., Piotrowska-Seget, Z., Labuzek, S. 2003. Bacterial Degradation and Bioremediation of Polycyclic Aromatic Hydrocarbons. Polish Journal of Environmental Studies, Vol. 12, No. 1; 15-25

Nawaz, Muhammad Farrakh, Guilhem Bourrié dan Sadaf Gul. 2014. Factors Affecting Redox Reactions in Hydromorphic Soils. a Review. *Pak. J. Agri. Sci., Vol. 51(3), 515-521; 2014ISSN (Print) 0552-9034, ISSN (Online) 2076-0906http://www.pakjas.com.pkGenetic diversity*

Ogner, G., & Schnitzer, M. (2006). Chemistry of Fulvic Acid, a Soil Humic Fraction, and its Relation to Lignin. *Canadian Journal of Chemistry*, *49*(7), 1053–1063. https://doi.org/10.1139/v71-175

Ouni, Y., Ghnaya, T., Montemurro, F., Abdelly, C., & Lakhdar, A. (2014). The role of humic substances in mitigating the harmful effects of soil salinity and improve plant productivity. *International Journal of Plant Production*, *8*(3), 353–374.

Owenya, M., W. Mariki, A. Stewart, T. Friedrich, J. Kienzle, A. Kassam, R. Shetto, and S.Mkomwa. 2012. Conservation agricultureand sustainable crop intensification inKaratu District, Tanzania. Integrated CropManagement. 15: 1-40.

Padmowijoto, S. 2004. Pengembangan Model Pertanian Terpadu. Workshop Agroforestry 2004, Fakultas Kehutanan, Universitas Gadjah Mada. Yogyakarta

Palilingan RN, Pungus M, Rende J & Turang A. 2005.*Perubahan Iklim Mikro Akibat PerubahanFungsi Lahan Di Sekitar Stasiun KlimatologiKayuwatu, Manado*. Manado: FakultasFMIPA, Universitas Negeri Manado. h 81.

Rahman, M. M., Tsukamoto, J., Rahman, M. M., Yoneyama, A., & Mostafa, K. M. (2013). Lignin and its effects on litter decomposition in forest ecosystems. *Chemistry and Ecology*, *29*(6), 540–553. https://doi.org/10.1080/02757540.2013.790380

Rahmawati, Atik. 2011. Isolasi dan Karakterisasi Asam Humat dari Tanah Gambut. Jurnal Phenomenon Vol. 2 No. 1 November 2011

Riffaldi, R., R. Levi-minzi, and A. Saviozzi, 1983. Humic fractions of organicwastes, Agric. Ecosyst. Environ.,10, 353–359.

Rosalva, A., J. Paolini, M. Robles, and E. Villegas.2006. Nitrogen and phosphoruscontributions from litterfall in shade growncoffee (Coffea arabica) plantations in theVenezuelan Andes. Abstract, p. 155-93,18thWorld Congress of Soil Science.Philadelphia, USA.

Ruhiyat, D. 1993. Strategi Pembangunan Hutan Tanaman Menghadapi Tahun 2000. Makalah dalam seminar mahasiswa kehutanan indonesia III. Fakultas Kehutanan Universitas Mulawarman, Samarinda.

Salmin dan Ilahude, A.G. 1988. Pencirian Gugus-gugus Fungsi Asam Humat Berdasarkan Analisis Spektroskopi Ultra Lembayung – Cahaya Tampak dan Infra Merah. Jurnal Oseana, Volume XIII, Nomor 1: 12 - 20, 1988

Sayara, T., Sarra, M., Sanchez, A. 2009. Effect of Composting Controlling Factors on the Bioremediation of Polycyclic Aromatic Hydrocarbons (PAH) Contaminated Soil. Palstine: Proceedings of the Second International Conference on Energy and Environmental Protection in the Sustainable Development.

Sayekti, Novi. 2010. Pengelolaan Lahan untuk Meningkatkan Kualitas Tanah pada Lahan Tegal di Kecamatan Jatiyoso Kabupaten Karanganyar. Skripsi. UNS. Surakarta

Schnitzer, M., and S. U. Khan. 1972. HumicSubstances in the Environment. Marcel Dekker, Inc., New York, NY.

Schulten, H.-R. 1996. A new approach to the structural analysis ofhumic substances in water and soils. Pp.42-56. In: Humic and Fulvic Acids. Isolation, Structure, and Environmental Role, J. S. Gaffney, N. A. Marley,

and S. B. Clark (eds.). ACS Symposium Series 651. American Chemical Society, Washington, DC.

Schüring, J., H. Schulz, W. Fischer and J. Böttcher. 2000.Redox: fundamentals, processes, andapplications,Springer Verlag.

Senesi, N., and G. Brunetti, 1996. Chemical and physicochemical parameters for quality evaluation of humicsubstances produced during composting, in: Debertoldi M., Sequi P., Lemmes B., Papi T. (Eds.), TheScience of Composting,European Comission International Symposium, Blackie Academic&Professional, Part 1, Glasgow UK 195–212.

Seran, David. 2011. Humifikasi pada Tanah di Beberapa Tipe Tegakan Hutan Papua Barat dengan Pendekatan Spektrofotometrik. Jurnal Penelitian Hutan dan Konservasi Alam Vol. 8 No. 1: 87-94

Siringoringo, Harris Herman. 2016. Peranan Penting Pengelolaan Penyerapan Karbon Dalam Tanah. *Jurnal Analisis Kebijakan Kehutanan*, *11*(2), 175–192. https://doi.org/10.20886/jakk.2014.11.2.175-192

Siti Rahmah, Yusran, dan Husain Umar. 2014. Sifat Kimia Tanah pada BerbagaiTipe Penggunaan Lahan di Desa Bobo Kecamatan Palolo Kabupaten Sigi. Warta Rimba Volume 2 No. 1 Juni 2014 hal: 88-95

Slamet, Supriyadi. 2008. Kandungan Bahan Organik sebagai Dasar Pengelolaan Tanah di Lahan Kering Madura. Embryo Vol. 5 No. 2 Desember 2008

Soil Survey Staff. 2014. *Keys to Soil Taxonomy. Twelve Edition. 2014*. United States Departement of Agriculture-Natural Resources Conservation Service. Washington, DC

Sparks, D. 2003. Redox Chemistry of Soils, Environmental soil chemistry, Academic Pr.

Srilatha, M., Rao, P.C., Sharma, S.H.K, dan Padmaja, G. 2013.Physico – chemical characterization of humic substances under long – term application of fertilizers and manures in rice – rice cropping sequence in an Inceptisol. *International Journal ofAdvanced Research.*1 (10): 343-348.

Stevenson, F. 1. and Goh, K. M. 1972. Infrared spectra of humic and fulvic acids and their methylated derivatives: Evidence for nonspecificity of analytical methods for oxygen-containing functional groups.*Soil Sci.* 113, 334-345.

Stevenson, F.J. 1994. Humus Chemistry: Genesis, Composition, Reaction. 2th edition. Jhon Wiley and Sons. New York

Sudarsono dan Purwanto, 2009. Pengelolaan Hutan Pinus untuk Konservasi Sumberdaya Air. Prosiding Workshop, Peran Hutandan Kehutanan Dalam

Meningkatkan Daya Dukung DAS.Surakarta, 22 Nopember 2007. Bogor: Pusat Litbang Hutandan Konservasi Alam.

Sudaryono. 2004. Pengaruh Naungan Terhadap Iklim Mikro pada Budidaya Tanaman Tembakau Rakyat. J. Tek. Ling. P3TL-BPPT. 5(1):56-60

Sulistiyanto, Y., Rieley, J.O., dan Limin, S.H. 2005. Laju Dekomposisi dan Pelepasan Hara dari Seresah pada Dua Sub-Tipe Hutan Rawa Gambut di Kalimantan Tengah. Jurnal Manajemen Hutan Tropika Vol. XI No. 2: 1-14 (2005)

Suripin. 2002. Pelestarian Sumber Daya Tanah dan Air. Penerbit Andi. Yogyakarta

Suwahyono, Untung. 2011. Prospek Teknologi Remediasi Lahan Kritis dengan Asam Humat (Humic Acid). Jurnal Teknik Lingkungan Vol. 12 No. 1 Hal. 55 – 65

Tan, K. H. (2014). *Humic Matter in Soil and the Environment: Principles and controversies*. *CRC Press*.

Varadachari, C., & Ghosh, K. (1984). On humus formation. *Plant and Soil*, *77*(2–3), 305–313. https://doi.org/10.1007/BF02182933

Xiangyin Ni, Wanqin Yang, Bo Tan, Han Li, Jie He, Liya Xu & Fuzhong Wu. 2016. Forest gaps slow the sequestration of soil organic matter: a humification experiment with six foliar litters in an alpine forest. Scientific **Reports** | 6:19744 | DOI: 10.1038/srep19744

Wiharto, M. 2004. Produktivitas Vegetasi Hutan Hujan Tropis. http://rudyct.topcities.com/pps702_71034/m_wiharto.htm. (26 Agustus 2004)

Wolfgang, Z., Nicola S., George G.,Klaus K., Johannes L., Teodoro M. Miano, Anja M., GStz S. 1997. Factors controlling humification and mineralization of soil organic matter in the tropics. 0016-7061/97/$17.00 ©1997 Elsevier Science B.V. All rights reserved. Pll S0016-7061(97)000

Zadorova, T., Ondrej J., Radka K., dan Vít P. 2011. Influence of Terrain Attributes and Soil Propertieson Soil Aggregate Stability. Soil & Water Res., 6, 2011 (3): 111–119