DAFTAR PUSTAKA

Ajidirman. (2010). Kajian Kandungan Mineral Alofan dan Fenomena Fiksasi Fosfor pada Andisols. *J.Hidrolitan*, *1*(2), 15–20.

Anda, M., & Sarwani, M. (2012). No Title Mineralogy, Chemical Composition, and Dissolution of Fresh Ash Eruption: New Potential Source of Nutrients. *SSSAJ, Volume 76:*, 733–747. https://doi.org/10.2136/sssaj2011.0305

Anda, M., & Suparto, S. (2016). Characteristics of pristine volcanic materials: Beneficial and harmful effects and their management for restoration of agroecosystem. *Science of the Total Environment*, *543*, 480–492. https://doi.org/10.1016/j.scitotenv.2015.10.157

Anusha, P. V., Anuradha, C., Chandra Murty, P. S. R., & Kiran, C. S. (2019). Detecting outliers in high dimensional data sets using Z-score methodology. *International Journal of Innovative Technology and Exploring Engineering*, *9*(1), 48–53. https://doi.org/10.35940/ijitee.A3910.119119

Arnalds, Ó., Bartoli, F., Buurman, P., Óskarsson, H., Stoops, G., & García-Rodeja, E. (2007). Soils of volcanic regions in Europe. *Soils of Volcanic Regions in Europe*, 1–644. https://doi.org/10.1007/978-3-540-48711-1

Auliadesti, V. (2023). *Fraksionasi Karbon dan Stok Karbon Tanah Perkebunan Teh Gunung Talang*. Universitas Andalas.

Ayris, P. M., & Delmelle, P. (2012). The immediate environmental effects of tephra emission. *Bulletin of Volcanology*, *74*(9), 1905–1936. https://doi.org/10.1007/s00445-012-0654-5

Balai Pengujian Standar Instrumen Tanah dan Pupuk (2023). Analisis Kimia Tanah, Tanaman, Air, Dan Pupuk. In *Petunjuk Teknis Edisi*. https://tanahpupuk.bsip.pertanian.go.id

Basile-Doelsch, I., Amundson, R., Stone, W., Masiello, C., Bottero, J.-Y., Colin, F., Masin, F., Borschneck, D., & Meunier, J. D. (2005). Mineralogical control of organic carbon dynamics in a volcanic ash soil on La Reunion. *European Journal of Soil Science - EUR J SOIL SCI*, *0*. https://doi.org/10.1111/j.1365-2389.2005.00703.x

Bohn, H.L., B.L. McNeal & G.A O'Connor. (1979). Soil Chemistry. John Wiley & Sons. New York

Buckman, H. O. & Brady, N. C. (1969). *Ilmu Tanah*. Bhratara Karya Aksara, Jakarta. p.788.

Carrillo-ros, J., & Esteban-arispe, I. (2021). *Anion Composition of Apatite in the Au-Cu Epithermal Deposit of Palai-Islica (Almer í a , SE Spain) as an Indicator of Hydrothermal Alteration*.

Childs, C. W., Matsue, N., & Yoshinaga, N. (1991). Ferrihydrite in volcanic ash soils of Japan. *Soil Science and Plant Nutrition*, *37*(2), 299–311. https://doi.org/10.1080/00380768.1991.10415040

Chung, S. Y., Venkatramanan, S., Elzain, H. E., Selvam, S., & Prasanna, M. V.

(2019). Supplement of missing data in groundwater-level variations of peak type using geostatistical methods. *GIS and Geostatistical Techniques for Groundwater Science*, *June*, 33–41. https://doi.org/10.1016/B978-0-12-815413-7.00004-3

Churchman, G. J. (2020). Alteration, Formation, and Occurrence of Minerals in Soils. *Handbook of Soil Sciences (Two Volume Set), January 2012*, 564–635. https://doi.org/10.1201/b16386-22

Cressie, N. (2015). *Statistics for spatial data.* John Wiley & Sons.

Dahlgren, R. A., Saigusa, M., & Ugolini, F. C. (2004). The Nature, Properties and Management of Volcanic Soils. *Advances in Agronomy*, *82*, 113–182. https://doi.org/10.1016/S0065-2113(03)82003-5

Davidson, E. A., & Janssens, I. A. (2006). Temperature sensitivity of soil carbon decomposition and feedbacks to climate change. *Nauture Publisher*, *220*(April 2006). https://doi.org/10.1038/nature04514

Delfianto, R., Rayes, M. L., & Agustina, C. (2021). Morfologi Dan Klasifikasi Tanah Pada Toposekuen Lereng Barat Gunung Kelud, Kediri, Jawa Timur. *Jurnal Tanah Dan Sumberdaya Lahan*, *8*(2), 539–552. https://doi.org/10.21776/ub.jtsl.2021.008.2.24

Dixon, J., Schulze, D., Bigham, J., Fitzpatrick, R., & Schulze, D. (2002). *Iron Oxide*. https://doi.org/10.2136/sssabookser7.c10

Diza K, V., Zulhemi, & Syaryadhi, M. (2017). Monitoring Suhu Dan Kelembaban Menggunakan Mikrokontroler Atmega328 Pada Proses Dekomposisi Pupuk Kompos. *Jurnal Karya Ilmiah Teknik Elektro*, *2*(3), 91–98.

Erich, M., Plante, A., Fernandez, J., & Mallory, E. (2012). Effects of Profile Depth and Management on the Composition of Labile and Total Soil Organic Matter. *Soil Science Society of America Journal*, *76*, 408–419. https://doi.org/10.2136/sssaj2011.0273

Ermadani, E., Hermansah, H., Yulnafatmawita, Y., & Syarif, A. (2018). Dynamics of Soil Organic Carbon Fractions Under Different Land Management in Wet Tropical Areas. *Jurnal Solum*, *15*(1), 26. https://doi.org/10.25077/jsolum.15.1.26-39.2018

Farrasati, R., Pradiko, I., Rahutomo, S., Sutarta, E. S., Santoso, H., & Hidayat, F. (2020). C-organik Tanah di Perkebunan Kelapa Sawit Sumatera Utara: Status dan Hubungan dengan Beberapa Sifat Kimia Tanah. *Jurnal Tanah Dan Iklim*, *43*(2), 157. https://doi.org/10.21082/jti.v43n2.2019.157-165

Farmer, V. C., McHardy, W. J., Palmeiri, F., Violante, A and Violate, P. (1991). Synthetic allophones formed in calcareous environment, Nature, conditions of formation and transformations. *SSSA Journal*, 55. pp. 1162-1166.

Fiantis, D., Ginting, F. I., Gusnidar, Nelson, M., Van Ranst, E., & Minasny, B. (2020). Geochemical Characterization and Evolution of Soils from Krakatau Islands. *Eurasian Soil Science*, *54*(11), 1629–1643. https://doi.org/10.1134/S1064229321110077

Fiantis, D., Malone, B., Pallasser, R., Ranst, E. Van, & Minasny, B. (2017).

Geochemical fingerprinting of volcanic soils used for wetland rice in West Sumatra, Indonesia. *Geoderma Regional*, *10*(November 2016), 48–63. https://doi.org/10.1016/j.geodrs.2017.04.004

Fiantis, D., Nelson, M., Shamshuddin, J., Goh, T. B., & Ranst, E. Van. (2016). Initial Carbon Storage in New Tephra Layers of Mt. Talang in Sumatra as Affected by Pioneer Plants. *Communications in Soil Science and Plant Analysis*, *47*(15), 1792–1812. https://doi.org/10.1080/00103624.2016.1208755

Fiantis, D., Rudiyanto, Ginting, F. I., Utami, S. R., Sukarman, Anda, M., Jeon, S. H., & Minasny, B. (2022). Sustaining the productivity and ecosystem services of soils in Indonesia. *Geoderma Regional*, *28*(July), e00488. https://doi.org/10.1016/j.geodrs.2022.e00488

Fiantis, D., Rudiyanto, Gusnidar, Ginting, F. I., Padrikal, R., Prayoga, D., Arianto, B., Fajrianeldi, R., & Nelson, M. (2023). Carbon and Phosphorus in Volcanic Soils of Mt. Kerinci (Sumatra) After Long Term Tea and Paddy Cultivation. *Communications in Soil Science and Plant Analysis*, *54*(22), 3169–3184. https://doi.org/10.1080/00103624.2023.2253843

Fiantis, D., Yulanda, N., Ginting, F. I., & Agustian. (2024). Digital mapping of soil organic carbon in volcanic soils after prolonged eruption Mt. Sinabung, Karo Regency, North Sumatra, Indonesia. *IOP Conference Series: Earth and Environmental Science*, *1306*(1). https://doi.org/10.1088/1755-1315/1306/1/012024

Gani, R. A., & Purwanto, S. (2021). *Karakteristik Tanah Vulkanik di Kabupaten Wonosobo dan Pengelolaannya untuk Pertanian Characteristics of Volcanic Soils at Wonosobo District and their Management for Agriculture*. *45*(1), 1–11.

Grazia, M., Figlia, D., Bellanca, A., Neri, R., & Stefansson, A. (2007). *Chemical weathering of volcanic rocks at the island of Pantelleria , Italy : Information from soil profile and soil solution investigations*. *246*, 1–18. https://doi.org/10.1016/j.chemgeo.2007.07.025

Harahap, I. (2007). *Kajian Sifat Kimia Tanah Vulkanis Pasca Erupsi Gunung Talang 12 April 2005 Di Aie Batumbuak Kecamatan Gunung Talang Kabupaten Solok.* [Skripsi] Universitas Andalas: Padang.

H, H., Dianita, R., & AR, A. (2024). Dampak Penggunaan dan Pengolahan Tanah dalam Usahatani Sayuran Terhadap Infiltrasi Tanah Andisol di Kabupaten Kerinci. *Jurnal Ilmiah Universitas Batanghari Jambi*, *24*(1), 214. https://doi.org/10.33087/jiubj.v24i1.5024

Harsh, J., Chorover, J., & Nizeyimana, E. (2002). Allophane and Imogolite. *Soil Mineralogy with Environmental Applications*, 291–322. https://doi.org/10.2136/sssabookser7.c9

Haryati, U. (2014). Karakteristik Fisik Tanah Kawasan Budidaya Sayuran Dataran Tinggi, Hubungannya dengan Srategi Pengelolaan Lahan. *Jurnal Sumberdaya Lahan*, 8(2): 125-138.

Haynes, R. J. (2000). Labile organic matter as an indicator of organic matter quality. *Soil Biology and Biochemistry*, *32*, 211–219.

Haynes, R. J. (2005). Labile Organic Matter Fractions as Central Components of the Quality of Agricultural Soils: An Overview. *Advances in Agronomy*, *85*, 221–268. https://doi.org/10.1016/S0065-2113(04)85005-3

Hewitt, A., Balks, M., & Lowe, D. (2021). *New book publication : the soils of Aotearoa New Zealand NEW BOOK PUBLICATION Soils of Aotearoa New Zealand*. *July*.

Hopkins, D., & Dungait, J. (2010). Soil Microbiology and Nutrient Cycling. In *Soil Microbiology and Sustainable Crop Production* (pp. 59–80). https://doi.org/10.1007/978-90-481-9479-7_3

Jongmans, A. G., Verburg, P., Nieuwenhuyse, A., & Oort, F. Van. (1995). *GEOI) ER ~ Allophane , imogolite , and gibbsite in coatings in a Costa Rican Andisol*. *64*, 327–342.

Kautsar, M., Ilyas, & Sufardi. (2018). 7498-22125-2-Pb. *Karakteristik Muatan Dan Sifat Fisikokimia Tanah Pada Ultisol Dan Andisol Di Lahan Kering Aceh Besar*, *3*(2), 409–419.

Kiš, I. M. (2016). Comparison of ordinary and universal kriging interpolation techniques on a depth variable (a case of linear spatial trend), case study of the Šandrovac Field. *Rudarsko Geolosko Naftni Zbornik*, *31*(2), 41–58. https://doi.org/10.17794/rgn.2016.2.4

Kome, G., Enang, R. K., Yerima, B., & Gilles Raoul, L. (2018). Models relating soil pH measurements in H 2 O, KCl and CaCl 2 for volcanic ash soils of Cameroon. *Geoderma Regional*, *14*, e00185. https://doi.org/10.1016/j.geodrs.2018.e00185

Krull, E., Baldock, J., & Skjemstad, J. (2001). Soil texture effects on decomposition and soil carbon storage. *Net Ecosystem Exchange*, 103–110.

Lembaga Penelitian Tanah. (1979). Penuntun Analisis Fisika Tanah. Departemen lmu Tanah. Balai Penelitian dan Pengembangan Pertanian: Bogor. 47p

Liu, T.-L., Juang, K.-W., & Lee, D.-Y. (2006). Interpolating Soil Properties Using Kriging Combined with Categorical Information of Soil Maps. *Soil Science Society of America Journal*, *70*(4), 1200–1209. https://doi.org/10.2136/sssaj2005.0126

Liu, X., Rezaei, M., Zwieten, L. Van, Esfandbod, M., Rose, M. T., & Chen, C. (2023). Soil & Tillage Research Microbial carbon functional responses to compaction and moisture stresses in two contrasting Australian soils. *Soil & Tillage Research*, *234*(July), 105825. https://doi.org/10.1016/j.still.2023.105825

Liu, Y., Li, S., Sun, X., & Yu, X. (2016). Variations of forest soil organic carbon and its influencing factors in east China. *Annals of Forest Science*, *73*. https://doi.org/10.1007/s13595-016-0543-8

Liyanda, M., Karim, A., & Abubakar, Y. (2012). Analysis of Land Suitability Criteria for Cocoa Production of Three Cluster Development in Pidie District. *Agrista*, *16*(2), 62–79. http://jurnal.unsyiah.ac.id/agrista/article/view/289

Lubis, R. L. (2022). *Kajian Sifat Geokimia Tanah Selama 10 Tahun (2010-2020) Erupsi Gunung Sinabung Kabupaten Karo Provinsi Sumatera Utara*. Universitas Andalas.

Lyu, H., Watanabe, T., Kilasara, M., & Funakawa, S. (2018). Effects of climate on distribution of soil secondary minerals in volcanic regions of Tanzania. *Catena*, *166*(December 2017), 209–219. https://doi.org/10.1016/j.catena.2018.04.005

Lyu, H., Zhong, R., Kilasara, M., Hartono, A., Sun, Z., Funakawa, S., & Watanabe, T. (2024). Impact of Climate on Soil Organic Matter Composition in Soils of Tropical Volcanic Regions Revealed by EGA-MS and Py-GC/MS. *Environmental Science & Technology*, *58*. https://doi.org/10.1021/acs.est.3c07000

Mazzarino, M. J., Bertiller, M. B., Sain, C., Satti, P., & Coronato, F. (1998). Soil nitrogen dynamics in northeastern Patagonia steppe under different precipitation regimes. *Plant and Soil*, *202*(1), 125–131. https://doi.org/10.1023/A:1004389011473

Mcdaniel, a, & Wilson, M. a. (2007). Physical and chemical characteristics of ash-influenced soils of inland northwest forests. *USDA Forest Service Proceedings RMRS-P-44*, 31–45.

Mikutta, R., Kleber, M., Torn, M., & Jahn, R. (2006). Stabilization of Soil Organic Matter: Association with Minerals or Chemical Recalcitrance? *Biogeochemistry*, *77*, 25–56. https://doi.org/10.1007/s10533-005-0712-6

Minasny, B., Fiantis, D., Hairiah, K., & Van Noordwijk, M. (2021). Applying volcanic ash to croplands – The untapped natural solution. *Soil Security*, *3*(March), 100006. https://doi.org/10.1016/j.soisec.2021.100006

Mizota, C., & Reeuwijk, L. Van. (1989). Clay mineralogy and chemistry of soils formed in volcanic material in diverse climatic regions. In *ISM Monograph* (p. 185). http://www.cabdirect.org/abstracts/19901941362.html

Nanzyo, M. (2002). Unique properties of volcanic ash soils. *Glob. Environ. Res.*, *6*.

Nanzyo, M., Dahlgren, R., & Shoji, S. (1993). Chapter 6 Chemical Characteristics of Volcanic Ash Soils. *Developments in Soil Science*, *21*(C), 145–187. https://doi.org/10.1016/S0166-2481(08)70267-8

Neculman, R., Rumpel, C., Matus, F., Godoy, R., Steffens, M., & de la Luz Mora, M. (2013). Organic matter stabilization in two Andisols of contrasting age under temperate rain forest. *Biology and Fertility of Soils*, *49*(6), 681–689. https://doi.org/10.1007/s00374-012-0758-2

Nikpey, M., Sedighkia, M., & Nateghi, M. B. (2017). Comparison of Spatial Interpolation Methods for Mapping the Qualitative Properties of Soil. *Advances in Agricultural Science*, *5*(03), 01–15. www.aaasjournal.org

Novi, F. (2020). *Pemetaan Digital Mineral Liat Non-Kristalin Dan P-Retensi Di*

Kawasan Sekitar Kaldera Maninjau Sumatera Barat. http://scholar.unand.ac.id/60995/%0Ahttp://scholar.unand.ac.id/60995/4/9-DAFTAR PUSTAKA.pdf

Ozaytekin, H. H. (2011). Soil Formation overlying Volcanic Materials at Mt . Erenler , Konya , Turkey Soil formation overlying volcanic materials at Mount Erenler , Konya , Turkey. *Turk J Agric For*, *35*, 545–562. https://doi.org/10.3906/tar-1102-2

Panichini, M., Neculman, R., Godoy, R., Arancibia-Miranda, N., & Matus, F. (2017). Understanding carbon storage in volcanic soils under selectively logged temperate rainforests. *Geoderma*, *302*(December 2016), 76–88. https://doi.org/10.1016/j.geoderma.2017.04.023

Parfitt, R.L., & Wilson, A. . (1985). Estimation of allophane and halloysite in three sequences of volcanic soils , New Zealand. *Volcanic Soils. Catena Suppl*, *7(1)*, 8.

Parfitt, R. L. (1990). *Allophane in New Zealand-A Review*. *January 1990*.

Parfitt, R. L. (2009). Allophane and imogolite: role in soil biogeochemical processes. *Clay Minerals*, *44*(1), 135–155. https://doi.org/10.1180/claymin.2009.044.1.135

Pires, C. V., Schaefer, C. E. R. G., Hashigushi, A. K., Thomazini, A., Filho, E. I. F., & Mendonça, E. S. (2017). Soil organic carbon and nitrogen pools drive soil C-CO2 emissions from selected soils in Maritime Antarctica. *Science of the Total Environment*, *596–597*, 124–135. https://doi.org/10.1016/j.scitotenv.2017.03.144

Prayoga, D. (2021). *Pemetaan Digital Stok Karbon di Perkebunan Teh Pada Tanah Vulkanis Gunung Kerinci*. Universitas Andalas.

Pupuk, B. T. dan. (2023). Analisis Kimia Tanah, Tanaman, Air, Dan Pupuk. In *Petunjuk Teknis Edisi*. https://tanahpupuk.bsip.pertanian.go.id

Quist-Jensen, C. A., Wybrandt, L., Løkkegaard, H., Antonsen, S. B., Jensen, H. C., Nielsen, A. H., & Christensen, M. L. (2018). Acidification and recovery of phosphorus from digested and non-digested sludge. *Water Research*, *146*, 307–317. https://doi.org/10.1016/j.watres.2018.09.035

Rasmussen, C., Matsuyama, N., Dahlgren, R., Southard, R., & Brauer, N. (2007). Soil Genesis and Mineral Transformation Across an Environmental Gradient on Andesitic Lahar. *Soil Science Society of America Journal - SSSAJ*, *71*. https://doi.org/10.2136/sssaj2006.0100

Rendón, M., Viviescas, J., Osorio, J., & Hernández, M. (2020). Chemical, Mineralogical and Geotechnical Index Properties Characterization of Volcanic Ash Soils. *Geotechnical and Geological Engineering*, *38*. https://doi.org/10.1007/s10706-020-01219-3

Rennert, T. (2019). *Wet-chemical extractions to characterise pedogenic Al and Fe species – a critical review*. 1–16.

Rezky, R. (2019). *Korelasi nilai indeks vegetasi sawah dengan kadar karbon pada tanah vulkanis gunung kerinci*. Universitas Andalas.

Rumpel, C., & Kögel-Knabner, I. (2011). Deep soil organic matter-a key but poorly understood component of terrestrial C cycle. *Plant and Soil*, *338*, 143–158. https://doi.org/10.1007/s11104-010-0391-5

Saidy, A. . (2018). *Bahan Organik Tanah : Klasisfikasi, Fungsi dan Metode*. Lambung Mangkurat University Press, 2018. https://lmsspada.kemdiktisaintek.go.id/pluginfile.php/694672/mod_resource/content/0/Buku - Bahan Organik Tanah.pdf

Sari, M. N. (2017). *Pengaruh Bahan Organik Terhadap Ketersediaan Fosfor Pada Tanah-Tanah Kaya Al Dan Fe Effect of Organic Matter on Phosphorus Availability in Soils Rich of Al and Fe*. *1*(1), 65–71.

Schwertmann, U. (1985). *The Effect of Pedogenic Environments on Iron Oxide Minerals BT - Advances in Soil Science* (B. A. Stewart (ed.); pp. 171–200). Springer New York. https://doi.org/10.1007/978-1-4612-5046-3_5

Seprianto. (2016). *Fraksionasi Karbon Tanah Vulkanis di Kecamatan 2 x 11 Enam Lingkung Kabupaten Padang Pariaman*. Universitas Andalas.

Shang, C., Zelazny, L. W., & Polytechnic, V. (2018). *Selective Dissolution Techniques for Mineral Analysis of Soils and Sediments*. *May*.

Shi, J. (2023). Soil labile organic carbon fractions mediate microbial community assembly processes during long - term vegetation succession in a semiarid region. *IMeta*, *2*(4), 1–12. https://doi.org/10.1002/imt2.142

Simanjuntak, C. M., & Elfiati Deni, D. D. (2015). Dampak Erupsi Gunung Sinabung Terhadap Sifat Kimia Tanah Di Kabupaten Karo (The impact of eruption of Mount Sinabung on chemical properties of soil in Karo). *Peronema Forestry Science Journal*, 1–6.

Siregar, P., Fauzi, & Supriadi. (2017). Effect of giving some organic matter and incubation period to some chemical fertility aspects of Ultisol. *Jurnal Agroekoteknologi*, *5*(2), 256–264.

Six, J., Conant, R. T., Paul, E. A., & Paustian, K. (2002). Stabilization mechanism of soil organic matter: Implication for C-saturation of soils. *Plant and Soil*, 241, pp. 155-176.

Smith, P., Haberl, H., Popp, A., Erb, K.-H., Lauk, C., Harper, R., Tubiello, F. N., de Siqueira Pinto, A., Jafari, M., Sohi, S., Masera, O., Böttcher, H., Berndes, G., Bustamante, M., Ahammad, H., Clark, H., Dong, H., Elsiddig, E. A., Mbow, C., … Rose, S. (2013). How much land-based greenhouse gas mitigation can be achieved without compromising food security and environmental goals? *Global Change Biology*, *19*(8), 2285–2302. https://doi.org/10.1111/gcb.12160

Sparling, G., Vojvodić-Vuković, M., & Schipper, L. A. (1998). Hot-water, soluble C as a simple measure of labile soil organic matter: The relationship with microbial biomass C. *Soil Biology and Biochemistry*, *30*(10–11), 1469–1472. https://doi.org/10.1016/S0038-0717(98)00040-6

Soepardi, G. (1983). *Sifat dan Ciri Tanah*. Bogor: Departemen Tanah, Fakultas Pertanian, IPB.

Sposito, G. (2017). *The Surface Chemistry of Natural Particles*. Oxford University Press.

Sparling, G., Vojvodić-Vuković, M., & Schipper, L. A. (1998). Hot-water, soluble C as a simple measure of labile soil organic matter: The relationship with microbial biomass C. *Soil Biology and Biochemistry*, *30*(10–11), 1469–1472. https://doi.org/10.1016/S0038-0717(98)00040-6

Stevenson, F.J. (1994). *Humus Chemistry, Genesis, Composition, Reaction.* Second. Ed. New York: John Wiley & Sons. Inc. p 496.

Subardja, D., Prihastuti, Kasno, A., Hairiah, K., Widianto, Utami, S. R., Suprayogo, D., Sunaryo, Sitompul, S., Lusiana, B., Mulia, R., Noordwijk, M. van, & Cadisch, G. (2007). Pengelolaan tanah masam secara biologi. In *El -Hayah* (Vol. 2, Issue 2).

Sufardi, S., Arabia, T., Khairullah, K., & Apriani, I. (2021). *IOP Conference Series : Earth and Environmental Science Particle size distribution and clay minerals in dryland soils of Aceh Besar , Indonesia Particle size distribution and clay minerals in dryland soils of Aceh Besar , Indonesia*. https://doi.org/10.1088/1755-1315/922/1/012013

Sukarman, & Dariah, A. (2014). Tanah Andosol di Indonesia. In *Balai Besar Penelitian dan Pengembangan Sumberdaya Lahan Pertanian, Kementerian Pertanian* (Issue 12).

Sukarman, S., Dariah, A., & Suratman, S. (2020). Tanah Vulkanik Di Lahan Kering Berlereng Dan Potensinya Untuk Pertanian Di Indonesia / Volcanic Soils in Sloping Dry Land and Its Potential for Agriculture in Indonesia. *Jurnal Penelitian Dan Pengembangan Pertanian*, *39*(1), 21. https://doi.org/10.21082/jp3.v39n1.2020.p21-34

Suryani, E., Hikmatullah, & Suratman. (2015). Karakteristik Mineralogi dan Fisiko-Kimia Tanah-Tanah dari Abu Vulkanik di Halmahera, Maluku Utara, Indonesia. *Jurnal Tanah Dan Iklim*, *39*(2), 85–98.

Susanti, A., Khalil, M., & Sufardi, S. (2021). Evaluasi Cadangan Karbon Tanah pada Beberapa Tipe Penggunaan Lahan Kering di Kecamatan Blang Bintang Kabupaten Aceh Besar. *Jurnal Ilmiah Mahasiswa Pertanian*, *6*(2), 69–78. https://doi.org/10.17969/jimfp.v6i2.16960

Tabri, F., Aqil, M., & Efendi, R. (2018). Uji Aplikasi Berbagai Tingkat Dosis Pupuk Za Terhadap Produktivitas Dan Mutu Jagung. *Indonesian Journal of Fundamental Sciences*, *4*(1), 24. https://doi.org/10.26858/ijfs.v4i1.6012

Takahashi, T., & Dahlgren, R. A. (2016). Nature, properties and function of aluminum-humus complexes in volcanic soils. *Geoderma*, *263*, 110–121. https://doi.org/10.1016/j.geoderma.2015.08.032

Tan, K. H., & Van Schuylenborgh, J. (1961). On the classification and genesis of soils developed over acid volcanic material under humid tropical conditions. II. *Netherlands Journal of Agricultural Science*, *9*(1), 41–54. https://doi.org/10.18174/njas.v9i1.17634

Uchida, Y., Nishimura, S., & Akiyama, H. (2012). The relationship of water-

soluble carbon and hot-water-soluble carbon with soil respiration in agricultural fields. *Agriculture, Ecosystems and Environment*, *156*, 116–122. https://doi.org/10.1016/j.agee.2012.05.012

Ugolini, F., & Dahlgren, R. (2002). Soil development in volcanic ash. *Global Environ. Res. Engl. Ed.*, *6*.

Ulfa, N., Yulnafatmawita, Y., & Rasyidin, A. (2024). Kajian Sifat Fisika Tanah pada Beberapa Umur Tanaman Kelapa Sawit (Elaeis guineensis Jacq.) Rakyat di Nagari Ladang Panjang Kabupaten Pasaman, Sumatera Barat. *Agrikultura*, *35*(2), 365–376. https://doi.org/10.24198/agrikultura.v35i2.55692

Wagai, R., & Mayer, L. (2007). Wagai R, Mayer LM.. Sorptive stabilization of organic matter in soils by hydrous iron oxides. *Geochimica et Cosmochimica Acta*, *71*, 25–35. https://doi.org/10.1016/j.gca.2006.08.047

Wahyuni, E. T., Triyono, S., & Suherman. (2012). Penentuan Komposisi Kimia Abu Vulkanik dari Erupsi Gunung Merapi. *J. Manusia Dan Lingkungan*, *19*(2), 150–159.

Walcott, J. J., Sims, J., Walcott, J., Bruce, S., & Sims, J. (2024). *Soil Carbon for Carbon Sequestration and Trading : A Review of Issues for Agriculture and Forestry Soil carbon for carbon sequestration and trading : a review of issues for agriculture and forestry*. *January 2009*.

Wang, W. J., Baldock, J. A., Dalal, R. C., & Moody, P. W. (2004). *Decomposition dynamics of plant materials in relation to nitrogen availability and biochemistry determined by NMR and wet-chemical analysis*. *36*, 2045–2058. https://doi.org/10.1016/j.soilbio.2004.05.023

Watanabe, T., Harsh, J. B., & Wagai, R. (2023). Short-range ordered aluminosilicates. In *Encyclopedia of Soils in the Environment, Second Edition* (2nd ed.). Elsevier Ltd. https://doi.org/10.1016/B978-0-12-822974-3.00223-8

Watanabe, T., Ueda, S., Nakao, A., Ze, A. M., Dahlgren, R. A., & Funakawa, S. (2023). Disentangling the pedogenic factors controlling active Al and Fe concentrations in soils of the Cameroon volcanic line. *Geoderma*, *430*(December 2022), 116289. https://doi.org/10.1016/j.geoderma.2022.116289

Whitley, A., Moir, J., & Almond, P. (2019). A meta-analysis of exchangeable aluminium in New Zealand soils using the National Soils Database. *Soil Research*, *57*, 113–123. https://doi.org/10.1071/SR18246

Yulanda, N. (2022). *Pemetaan Digital Fraksionasi Karbon (C) Tanah Vulkanis Pasca Erupsi Berkelanjutan Gunung* (Issue C). Universitas Andalas.

Yuliana, A., Arifin, M., & Nurlaeny, N. (2017). Pengaruh Partikel Nano Abu Vulkanik dan Batuan Fosfat terhadap Muatan Variable dan Kemasaman Andisol. *Agrikultura*, *28*(3), 118–125. https://doi.org/10.24198/agrikultura.v28i3.15743

Yulnafatmawita, LusiMaira, Junaidi, Yusmini, N. (2005). Peranan Bahanorganik Dalam Pembebasanp-Terikat Padatanah Andisol. *J.Solum*, *II*(2), 69–73.

Zamanian, K., & Kuzyakov, Y. (2019). Contribution of soil inorganic carbon to

atmospheric CO2: More important than previously thought. *Global Change Biology*, *25*(1), e1–e3. https://doi.org/https://doi.org/10.1111/gcb.14463

Zhao, C., Miao, Y., Yu, C., Zhu, L., Wang, F., Jiang, L., Hui, D., & Wan, S. (2016). Soil microbial community composition and respiration along an experimental precipitation gradient in a semiarid steppe. *Scientific Reports*, *6*, 24317. https://doi.org/10.1038/srep24317

Yulnafatmawita. (2006). Hubungan Antara Status C-organik dan Stabilitas Agregat Tanah Limau Manis Padang Akibat Perubahan Penggunaan lahan. Jambi (ID): *Prosiding "Seminar Tahunan Dosen BKS – PTN Barat*" 25- 27 April 2006. pp.75-82.