DAFTAR PUSTAKA

Abdelaal, M., Fois, M., Fenu, G., Bacchetta, G., (2019). *Using MaxEnt Modeling to Predict the Potential Distribution of the Endemic Plant Rosa Arabica Crép. in Egypt. Ecological Informatics 50: 68–75.*

Adger, (2000). *Social and Ecological Resilience: are they Related*?, Progress in Human Geography *24,3, pp. 347–364.*

Aerts, R., Geeraert, L., Berecha. G., Hundera. K., Muys. B., De Kort. H., & Honnay, O. (2017). *Conserving wild Arabica coffee*: *Emerging threats and opportunities. Agriculture, Ecosystems & Environment,* 237, 75-79.

Agustini, K., Sumaryono, W., Widyanto, R.M. (2011). *Activity of Trigonella Foenum-Graceum on Some Cell Lines. Indonesian Journal of Cancer Chemoprevention*. Volume 2. Nomor 2: 233 – 240.

Ahmed, S., Stepp, J.R., (2016). *Beyond yields: climate change effects on specialty crop quality and agroecological management*. Elem. Sci. Anthr. 4, 1–16. https://doi.org/10.12952/journal.elementa.000092.

Aldrian, E. dan Ratri, D.N. (2012). *Pertanyaan yang Sering Diajukan Mengenai Perubahan Iklim (disarikan dari Intergovermental Panel Climate Change Report 2007)*. Pusat Perubahan Iklim dan Kualitas Udara, BMKG

Aling, D. F. (2009). *Sistem Perlindungan Indikasi Goegrafis sebagai Bagian dari Hak Kekayaan Intelektual di Indonesia*. Universitas Sam Ratulangi. Manado.

Amin, M. N., Hossain, M. A., & Roy, K. C. (2004). Effects of moisture content on some physical properties of lentil seeds. *Journal of Food Engineering*, *65*, 83–87. https://doi.org/10.1016/j.jfoodeng.2003.12.006

Anitawati, M., Sutikno. (2010). *Pemodelan Statistical Downscaling Luaran GCM Dengan Metode Principal Component Regression (PCR) dan Projection Pursuit Regression (PPR)*. ITS. Surabaya.

Anonim. (2014). *Ekspor kopi menurut negara tujuan*. Badan Pusat Statistik. http://www.bps.go.id/tab-sub/view.php. [26 Desember 2018].

Araujo M. B., Guisan A. (2006). *Five (or so) Challenges for Species Distribution Modelling*, *Journal of Biogeography* 33 (10): 1677-1688.

Ashari S. (1995). *Hortikultura Aspek Budidaya*. Jakarta(ID): Penerbit UI.

Avelino J, Barboza B, Juan Carlos Araya JC, Fonseca C, Davrieux F, Guyot B, Cilas C. (2005). *Effects of Slope Exposure, Altitude and Yield on Coffee*

Quality in Two Altitude Terroirs of Costa Rica, Orosi and Santa María de Dota. J Sci Food Agric 85:1869–1876. https://doi.org/10.1002/jsfa.2188.

Avelino, J., Barboza, B., Davrieux, F., & Guyot, B. (2007). *Shade Effects on Sensory and Chemical Characteristics of Coffee from Very High Altitude Plantations in Costa Rica*. 2nd international symposium on multi-strata agroforestry systems with perennial crops: Making ecosystem services count for farmers, consumers, and the environment. Turrialba.

Badan Litbang Pertanian. (2011). *Pedoman Umum Adaptasi Perubahan Iklim Sektor Pertanian. Badan Penelitian dan Pengembangan Pertanian*. Jakarta. 67 hlm.

Bappenas, (2014). *Koordinasi Pembangunan Bidang SDA dan Lingkungan Hidup dalam Rangka Mendukung Pelaksanaan Kebijakan Ketahanan Pangan dan Energi. Deputi SDA dan Lingkungan Hidup*. Jakarta.

Baldwin, R. A, (2009). *Use of Maximum Entropy Modelling*, pp. 854-866. *Modeling in Wildlife Research*. Entropy, 11 (4).

Baon. J. B., Pujiyanto dan R. Erwijoyo. (2003). *Evaluasi dampak kekeringan 2002 terhadap produksi kopi dan kakao tahun 2003 di PT Perkebunan Nusantara XII*. Laporan penelitian Pusat Penelitian Kopi dan Kakao Indonesia. Hal. 22.

Barbosa JN, Borém FM, Cirillo MA, Malta MR, Alvarenga AA, Alves HMR. (2012). *Coffee Quality and Its Interactions With Environmental Factors in Minas Gerais, Brazil*. J Agric Sci 4 (5). https://doi.org/10.5539/jas.v4n5p181

Barros. R. S. M. M., Rena. A. B. (1999). *Physiology of Growth and Production of the Coffee Tree – a Review*. J. Coffeea Res. 27:1-54.

Barel, M., & M. Jacquet. (1994). *Coffee Quality: Its Causes, Appreciation And Improvement*. Plant Rech Dev. 1:5-10.

Belay, G. and A.P. Gholap. (2009). *Characterization and Determination of Chlorogenic Acids (CGA) in Coffee Beans by UV-Vis Spectroscopy*. J.African of Pure and Applied Chemistry. 3 (11) : 234-240.

Bertrand, B., Vaast, P., Alpizar, E., Etienne, H., Davrieux, F., & Charmetant, P. (2006). *Comparison of Bean Biochemical Composition and Beverage Quality of Arabica Hybrids Involving Sudanese-Ethiopian Origins with Traditional Varieties at Various Elevations in Central America*. Tree Physiology, 26(9), 1239–1248.

Bertrand, B., Boulanger, R., Dussert, S., Ribeyre, F., Berthiot, L., Descroix, F., & Joët, T. (2012). *Climatic Factors Directly Impact the Volatile Organic Compound Fingerprint in Green Arabica Coffee Bean as Well as Coffee Beverage Quality*. Food Chemistry, 135(4), 2575–2583.

Bicho, N.C., Leitao, A.E., Ramalho, J.C., Lidon, F.C., (2011). *Identification of Chemical Clusters Discriminators of Roast Degree in Arabica and Robusta Coffee Beans*, *J. Eur. Food Res Technol* (233) 303-311

Bicho, N. C., Leitao, A. E., Ramalho, J. C., de Alvarenga, N. B., & Lidon, F. C. (2013a). *Identification of Chemical Clusters Discriminators of Arabica and Robusta Green Coffee.* International Journal of Food Properties, 16(4), 895-904.

Bicho, N. C., Leitao, A. E., Ramalho, J. C., de Alvarenga, N. B., & Lidon, F. C. (2013b). *Impact of Roasting Time on the Sensory Profile of Arabica and Robusta Coffee*. Ecology of Food and Nutrition, 52(2), 163-177.

BMKG. (2011). Evaluasi cuaca dan sifat hujan Bulan Agustus 2011 serta prakiraan cuaca dan sifat hujan Bulan September 2011. *Bulletin Metereologi. BMKG. Batam* 1:39

Bosselmann A, Dons K, Oberthur T, Olsen CS, Ræbild A and Usma H, (2009). *The Influence of Shade Trees on Coffee Quality in Small Holder Coffee Agroforestry Systems in Southern Colombia*. *Agric Ecosyst Environ* 129:253–260.

Borem, F. M., Ribeiro, D. R., Taveira, J. H. S., Prado, M. V. B., Ferraz, V., Tosta, M. F., et al. (2014). *Genotype and Environment Interaction in Chemical Composition and Sensory Quality of Natural Coffees*. Proceeding of the 25th international congress of ASIC.

Bunn C, Läderach P, Ovalle Rivera O, Kirschke D, (2015). *A bitter cup: climate change profile of global production of Arabica and Robusta coffee*. Clim Chang 129:89–101. https://doi.org/10.1007/s10584-014-1306-x

Camargo. M. B. P., (2010). *The Impact of Climatic Variability and Climate Change on Arabic Coffee Crop in Brazil. Bragantia, Campinas.* 69 (1): 239-247.

Carr. M. K. V. (2001). *Review Paper: The Water Relations and Irrigation Requirements of Coffee. Exp Agric*. 37: 1-36.

Caspersen, B. A. (2012). *A Well Rounded Palate, A Guide To The Coffee Tasters Flavor Wheel.* Retrieved from http://www.roastedmagazine.com/.

Chakraborty S. (2005). *Potential impact of climate change on plant pathogen interaction. Australasian Plant Pathhology* [Internet]. 04]; 34(1): 443-448. Tersedia Pada: http://link.springer.com/article/10.1071/AP 05084.

Chemura. A., Kutywayo. D., Chidoko. P., Mahoya. C. (2016). *Bioclimatic modelling of current and projected climatic suitability of coffee (Coffea arabica) production in Zimbabwe*. Reg Environ Chang 16:473–485. https://doi.org/10.1007/s10113-015-0762-9

Cheserek, J. J. dan Gichimu, B. M., (2012). *Drought and Heat Tolerance in Coffee: a Review. International Research Journal of Agricultural Science and Soil Science. 2* (12): 498-501.

Clarke, R.J. & R. Macrae, (1989). *Coffee Chemestry. Vol. I,* II. Elsevier Applied Science. London and New York.

Craparo ACW, Van Asten PJA, Läderach P, Jassogne LTP, Grab SW, (2015). *Coffea arabica yields decline in Tanzania due to climate change: Global implications.* Agric For Meteorol 207:1–10. https://doi.org/10.1016/j.agrformet.2015.03.005

DaMatta. F. M., and Ramalho J. D. C. (2006). *Impact of Drought and Temperature Stress on Coffee Physiology and Production: a Review*. Braz. *J. Plant Physiol*. 18:55-81.

DaMatta, F. M., Ronchi, C.P., Maestri, M., Barros, R.S., (2007). *Ecophysiology of coffee growth and production*. Braz. J. Plant Physiol. 19, 485–510 https://doi.org/0.1590/S1677-04202007000400014

Decazy FJ, Avelino B, Guyot J, Perriot C, Pineda and Cilas C. (2003). *Quality of different Honduran Coffees in Relation to Several Environments*. *Journal of Food Science*. Vol 68 (7) : 2356-2361.

Descroix, F. & J. N. Wintgens (2004). Establishing a coffee plantation. p. 178-245. ***In*** : J. N. Wintgens (Ed). *Coffee: Growing, Processing, Sustainable Production.* WILEY-CH Verlag GmbH & Co. KgaA, Weinheim

Dieterle, F. (2003). *Multianalyte Quantifications by Means of Integration of Artificial Neural Networks, Genetic Algorithms and Chemometrics for Time-Resolved Analitycal Data*. (*Disertasi*). Der eberhard-karls Universitat Tubingen. Germany.

[Disbun] Dinas Perkebunan Provinsi Aceh. (2013). *Prospek Pengembangan Kopi Arabika Gayo di Kabupaten Aceh Tengah dan Bener Meriah*. Aceh

Duarte, G. & A. Farah (2008). *Chlorogenic Acids and Lactones on Brazilian Commercial Coffees*. Proceedings 22nd International Conference on Coffee Science (ASIC) 2008.p. 224-227. Campinas, Brazil.

Ellyanti, Karim A, dan Basri H. (2012). *Analisis Indikasi Geografis Kopi Arabika Gayo Ditinjau dari Rencana Tata Ruang Wilayah Kabupaten*. *Jurnal Agrista.* Vol. 16 No. 2.

Eskes, A.B., & T. Leroy. (2004). *Offee Selection and Breeding. In: wintgens, J.N. (ed.), Coffee: Growing, Processing, Sutainbale Production*. Wiley-VCH Verlag GmbH & Co. KgaA. Weinheim. P. 976.

Esquifel, P. & Victor. M. J. (2012). *Functional Properties of Coffee and Coffee By-Products*. *Journal of Food Research International.* 46. 488–495.

Farah, Adriana., Carmen M. D., (2006). *Phenolic Coumpounds in Coffee*. *Braz. J. Plant Physiol.*; 18 (1) : 23-36.

Farah, Adriana. (2012). *Coffee :Emerging Health Effects and Disease Prevention, First Edition.* John Willey & Sons, Inc and Institute of Food Technologists (USA) : Wiley-Blackwell Publising Ltd.

Farah. A., T. D. Paulis, L. C. Trugo, P. R. Martin. (2005). *Effect of Roasting On The Formation of Chlorogenic Acid Lactones in Coffee. Journal of Agricultural and Food Chemistry.* 53(5):1505-1513.

Farida, Ana., E.Ristanti, dan A.C. Kumoro. (2013). *Penurunan Kadar Kafein dan Asam Total pada Biji Kopi Robusta Menggunakan Teknologi Fermentasi Anaerob Fakultatif Dengan Mikroba Nopkor MZ-15. J.* Teknologi kimia dan Industri. 2 (3).

Figueiredo, L.P.; F.M. Borém; F.C. Ribeiro; G.S. Giomo; P.A. Rios & M.F. Tosta (2012). *Quality Coffee (Coffea Arabica L.) Subjected to Two Processing Types. Proceedings 24th International Conference on Coffee Science (ASIC) 2012*. p. 502-506. Costarica.

Folke, C., S. R. Carpenter, B. H. Walker, M. Scheffer, T. Elmqvist, L. H. Gunderson, and C. S. Holling. (2004). *Regime Shifts, Resilience, and Biodiversity in Ecosystem Management. Annual Review of Ecology, Evolution and Systematics* 35:557-581.

Fourcade, Y. Et al., (2014). *Mapping Species Distributions With MaxEnt Using a Geographically Based Sample of Presence Data: A Performance Assessment of Methods for Correcting Sampling Bias. PloS ONE*, 9 (5), pp.1-13.

France, A. S., J.C.F. Mendonca, & S.D. Oliveira. (2005). *Composition of Green and Roasted Coffee of Different Cup Qualities. LWT-Food Sci. Technol.* 38(7): 709-715.

Franklin, J., Miller, J.A., (2009). *Mapping Species Distributions-Inference and Predictions.* Cambridge University Press, New York.

Friedlaender A S, Johnston D W, Fraser W R, Burns J, Halpin P N, and Costa D P. (2011). *Ecological Niche Modelling of Sympatric Krill Predators Araound Marguerite Bay, Western Antractic Peninsula. Deep Sea-Res* II 58: 1729 – 1740.

Frölicher TL, Winton M, Sarmiento JL. (2013). *Continued Global Warming After CO_2 Emissions Stoppage. Nature Climate Change*. 4(1):40-44.

Gunderson, L. H., and C. S.Holling, editors. (2002). *Panarchy: Understanding Transformations in Human and Natural Systems.* Island Press, Washington, D.C., USA.

Haggar. J., Scheep, K., (2011). *Coffee and Climate Change. Desk Sutdy: Impacts of Climate Change in four Pilot Countries of the Coffee & Climate Initiative.* Hamburg (DE): University of Greenwich & Kathleen Schepp.

Hameed A. Hussain S. A, and Suleria H. A. R. (2018). "*Coffee Bean-Related" Agroecological Factors Affecting the Coffee.* Phytochemistry. https://doi.org/10.1007/978-3-319-76887-8_21-1

Healy, A. (2016). *A Comparison of Preesence Only Suitability Models to Accurately Identify Prehistoric Agricultural Fields In Western.* New Mexico: http://digitalrepository.unm.edu/geog_etds/24.

Hoddinott, J., (2014). *Looking at Development Through a Resilience Lens.* In: Fan, S., Pandya-Lorch, R., Yosef, S. (Eds.), Resilience for Food and Nutrition Security. International Food Policy Research Institute, Washington DC, USA, pp. 19–26

[ICC] International Coffee Council. (2009). *Climate change and coffee, International Coffe Council*, 103rd session, 23-25 September 2009 [Internet][28 November 2018]. http://www.ico.org/documents/icc-103-6-r1e-climate-change.pdf.

[ICO] International Coffee Organization. (2016). *Top Coffee Producing Countries.* [Internet]. [28 November 2018]. http://www.ico.org/.

Imbach, P., Fung, E., Hannah, L., Navarro-Racines, C.E., Roubik, D.W., Ricketts, T.H., Harvey, C.A., Donatti, C.I., Läderach, P., Locatelli, B., Roehrdanz, P.R., (2017). *Coupling of pollination services and coffee suitability under climate change.* Proc. Natl. Acad. Sci. 114, 201617940. https://doi.org/10.1073/pnas.1617940114.

Indahwati, R., Kusnandar, D., & Sulistianingsih, E. (2014). *Metode Partial Least Squares Untuk Mengatasi Multikolinearitas Pada Model Regresi Linear Berganda.* Buletin Ilmiah Matematika Statistika Dan Terapannya, *3*(3), 169–174.

[IPCC], Intergovernmental Panel on Climate Change. (2013). *The Physical Science Basis.* Contribution of Working Group I to the Fifth Assessment Report of IPCC, WMO, UNEP. http://www.ipcc.ch/report/ar5/wg1.

IPCC. (2007). *Fourth Assessment Report (AR4) of the IPCC (2007) on Climate Change The Physical Science Basic.* Japan : Institute for Global Environmental Strategies (IGES) for the IPCC.

Iqbal, M. (2000). *'Pengolahan Data dengan Reegresi Linier Berganda'*, 4, pp. 1985-2000.

Jaramillo, J. Chaby-Olaye, A., Kamonjo, C., Jaramillo, A. and Vega, F.E. (2009). *Thermal Tolerance of the Coffee Berry Borer: Predictions of Climate Change Impact on Tropical Insect Pest. PLoS ONE.* pp. 79-101.

Jassogne. L, Läderach P , Asten VP (2013). *The Impact of Climate Change on Coffee in Uganda: Lessons from a case study in the Rwenzori Mountains*. *Oxfam Policy and Practice: Climate Change and Resilience* 9(1):51-66.

Jiang, Y., K. Satoh, and S. Watanabe. (2001). *Inhibition of Chlorogenic Acid Induced Cytotoxicity by CoCl2*. Anticancer Res. 2:3349-3353.

Johnson dan Wichern. (2007). *Applied Multivariate Statistical Analysis*. Edisi keenam. Pearson Prentice Hall.

Jolliffe, I.T. (2002). *Principal Component Analysis*. Edisi kedua. Springer-Verlag. New York.

Kadarsah. (2008). *Istilah Dalam Pemodelan Iklim. Meteorologi dan Sain Atmosfer*. https://kadarsah.wordpress.com/2008/04/15/istilah-dalam-pemodelan-iklim/. [12 Januari 2020]

Karoui R., A. M. Mouazena, E. Dufourb, L. Pillonelc, E. Schallerd, J. De Baerdemaekera, J. O. Bossetc. (2006). *Chemical Characterisation Of European Emmental Cheeses By Near Infrared Spectroscopy Using Chemometric Tools*. International Dairy Journal. 16: 1211–1217.

Kementerian Pertanian. (2018). *Outlook Kopi 2017*. Pusat Data dan Sistem Informasi Pertanian, ISSN : 1907-1507. Jakarta.

Killeen. J.T., Harper G. (2016). Coffee in the 21st century. *Will Climate Change and Increased Demand Lead to New Deforestation?*

Knopp, S., G. Bytof, & D. Selmar. (2006). *Influence of Processing On The Content of Sugars In Green Arabica Coffee Beans*. Eur. *Food Res. Technol*. 223(2): 195-201.

Kutywayo D, Chemura A, Kusena W, Chidoko P, Mahoya C, (2013). *The impact of climate change on the potential distribution of agricultural pests: the case of the coffee white stem borer (Monochamus leuconotus P.) in Zimbabwe*. PLoS ONE 141. https://doi.org/10.1371/journal.pone.0073432

Ky, C. L., J. Louarn, S. Dussert, B. Guyot, S. Hamon, & M. Noirot. (2001). *Caffeine, Trigonelline, Chlorogenic Acids And Sucrose Diversity In Wild Coffea Arabica L. And C. Canephora*. P. Accessions. *Food Chem*. 75 (2): 223-230.

Läderach P, Haggar J, Lau C, Eitzinger A, Ovalle O, Baca M, Jarvis A, Lundy M. (2010). *Mesoamerican Coffee: Building a Climate Change Adaptation Strategy. CIAT Policy Brief no. 2*. Centro International de Agricultura Tropical (CIAT), Cali, Colombia.

Läderach P, Julian RA, Carlos NR, Carlos J, Armando MV, Andi J. (2017). *Climate Change Adaptation Of Coffee Production In Space And Time*. *Climatic Change* (2017) 141:47–62. http://DOI 10.1007/s10584-016-1788-9.

Leloup, V., A. Louvrier, & R. Liardon, (1995). *Degradation Mechanisme Of Chlorogenic Acids During Roasting*. In: 16th International Conference on Coffee Science (ASIC). Kyoto. Japan.

Leonel. LE., Philippe. V. (2007). *Effects of Altitude, Shade, Yield and Fertilization on Coffee Quality (Coffea Arabica L. Var. Caturra) Produced in Agroforestry Systems of the Northern Central Zones of Nicaragua*. Presented at 2nd International symposium on multi-strata agroforestry systems with perennial crops: making ecosystem services count for farmers, consumers and the environment, pp 17–21

Leroy, T., F. Ribeyre, B. Bertrand, P. Charmetant, M. Dufour, C. Montagnon, P. Marraccini, & D. Pot. (2006). *Genetics Of Coffee Quality*. *Brazilian J. Plant Physiol*. 18(1): 229-242.

Lingle, T. R., & Menon, S. N. (2017). *Cupping and Grading-Discovering Character and Quality*. In B. Folmer (Ed.). The craft and science of coffee (pp. 181–203). London, UK: Academic Press. Lynch, J. G., & Zaube

Lubis, A. R., & Nurdasil. (2017). *Model Pasokan Kopi Aceh: Beberapa Simulasi Kebijakan. Laporan Akhir Penelitian Profesor*. Unsyiah. Banda Aceh.

Magrach A, Ghazoul J, (2015). *Climate and pest-driven geographic shifts in global coffee production: implications for forest cover, biodiversity and carbon storage*. PloSONE 10. https://doi.org/10.1371/journal.pone.0133071

Mahendradatta. M. (2007). *Pangan Aman dan Sehat, Prasyarat Kebutuhan Mutlak Sehari-hari*. Lembaga Penerbitan Universitas Hasanuddin, Makassar.

Masarirambi. MT., Chingwara. V., Shongwe. VD. (2009). *The Effect of Irrigation on Synchronization of Coffee (Coffea Arabica L.) Flowering and Berry Ripening at Chipinge, Zimbabwe*. Phys Chem Earth 34:786–789

Masters. G., Baker. P., Flood. J. (2009). *Climate Change and Agricultural Commodities*. CABI Position Paper.

Martini. H. R. (2013). *Pedoman Budidaya dan Pemeliharaan Tanaman Kopi di Kebun Campur*. Bogor (ID): World Agroforestry Centre (ICRAF) Southeast Asia Regional Program.

Mazzafera, P., & Carvalho, A. (1991). *Breeding For Low Seed Caffeine Content of Coffee (Coffea L.)* by Interspecific Hybridization. Euphytica, 59(1), 55e60. http://dx.doi.org/10.1007/BF00025361.

Merow. C., Matthew J. S., and John A. S., Jr. (2013). *A Practical Guide to MaxEnt for Modeling Species' Distributions: What it Ddoes, And Why Inputs And Settings Matter*. *Ecography* 36: 1058–1069.

[MoE] Ministry of Environment. (2010). *Indonesia Second National Communication under the United Nation Framework Convention on Climate Change* (UNFCCC), Republic of Indonesia.

Moss. RH., Edmonds. JA., Hibbard. KA., Manning. MR., Rose. SK., Vuuren. DPv., Carter. TR., Emori. S., Kainuma. M., Kram. T. (2010). *The Next Generation of Scenarios For Climate Change Research and Essessment*. Nature. 463:747- 756.doi:10.1038/nature08823.

Naidu. MM., Sulochanamma. G., Sampathu. SR., Srinivas. P. (2008). *Studies on Extraction and Antioxidant Potential of Green Coffee. Food Chemistry.* 107: 337-384.

Nair. S, Howlett, W. (2016). *From Robustness to Resilience: Avoiding Policy Traps in the Long Term.* Sustain Sci (2016) 11:909–917. DOI 10.1007/s11625-016-0387-z.

Nassar, A. M. K., Kubow, S., & Donnelly, D. J. (2015). High-throughput screening of sensory and nutritional characteristics for cultivar selection in commercial hydroponic greenhouse crop production. *International Journal of Agronomy*, 1–28. https://doi.org/10.1155/2015/376417.

Nelson GC, Rosegrant MW, Palazzo A, Gray I, Ingersoll C, Robertson R, Tokgoz S, Zhu T, Sulser TB, Ringler C. (2010). *Security, Farming, and Climate Change to 2050.* International Food Policy Research Institute. Washington DC (USA).

Nur AM. (2000). *Dampak La Nina terhadap produksi kopi Robusta*. Studi kasus tahun basah 1998. Warta Puslitkoka 16(1): 50-58.

Oliveira, A.P.L.R.; P.C. Corrȩa; S.C. Campos; G.H.H. Oliveira & F.M. Baptestini (2012). *Principal Component Analysis of Physical and Chemical Characteristics of Coffee Submitted to Different Postharvest Processes. Proceedings 24th International Conference on Coffee Science (ASIC) 2012.* p. 365-368. Costarica.

Ovalle-Rivera O, Läderach P, Bunn C, Obersteiner M, Schroth G. (2015). *Projected Shifts in Coffea Arabica Suitability Among Major Global Producing Regions Due to Climate Change*. PloS ONE 235, 10(4):e0124155. https://doi.org/10.1371/journal.pone.0124155.

Patil, P. N. (2012). Caffeine In Various Samples And Their Analysis With Hplc. *International Journal of Pharmaceutical Sciences Review & Resear*; Sep/Oct 2012, Vol. 16, 76.

Pereira, G. and Anand, T. (2007). *Seasonal Mortality Factors of the Coffee Leafminer (Leucoptera Coffeella). Bulletin of Entomological Research* 97: 421-432.

Petitpierre, B., MacDougall, K., Seipel, T., Broennimann, O., Guisan, A., Kueffer, C., (2015). *Will climate change increase the risk of plant invasions into mountains?* Ecol. Appl. 26, 530-544.

Phillips, S.J., Anderson, R.P. and Schapire, R.E. (2006), *"Maximum Entropy Modeling of Species Geographic Distributions"*, *Ecological Modelling*, Vol. 190, pp. 231-259.

Philips, S.J. & Dudik, M., (2008). *Modelling of Species Distribution With MaxEnt: New Extensions and a Comprhensive Evaluation*. *Ecography*, 31 December 2007, pp. 161-175.

Pohl. P., Ewelina. S., Maja. W., Anna. S., Madeja, (2013). *Food Analysis Methods*. 6:598–613. DOI 10.1007/s12161-012-9467-6.

Porter, J., Parry, M. and Carter, T. (1999). *The Potential Effects of Climate Change on Agricultural Insect Pests*. *Agriculture For Meteorol*. 57: 221-24.

Qiang, H.; L. Yaguang (2008). *Elucidation of The Mechanism of Enzymatic Browning Inhibition by Sodium Chlorite*. Pei Chen C. *Food Chemistry*, 110, 847-85.

Rahardjo, Pudji. (2012). *Panduan Budidaya dan Pengolahan Kopi Arabika dan Robusta.* Penebar Swadaya. Jakarta.

Rahn, E., Läderach, P., Baca, M., Cressy, C., Schroth, G., Malin, D., van Rikxoort, H., Shriver, J., (2014). *Climate change adaptation, mitigation and livelihood benefts in coffee production: where are the synergies?* Mitig. Adapt. Strateg. Glob. Change 19, 1119–1137. https://doi.org/10.1007/s11027-013-9467-x.

Rahn E, Vaast P, Laderach P, van Asten P, Jassogne L, Ghazoul J, (2018). *Exploring adaptation strategies of coffee production to climate change using a process-based model*. Ecol Model 371:76–89. https://doi.org/10.1016/j.ecolmodel.2018.01.009

Rahman. H.A., 2009. *Global Climate Change and its Effects on Human Habitat and Environtment in Malaysia*. *Malaysian Journal of environmental management*. 10 (2) : 17-32.

Rotstayn. LD., Jeffrey. SJ., Collier. MA., Dravitzki1. SM., Hirst. AC., Syktus, Won. KK. (2012). *Aerosol and Greenhouse Gas-Induced Changes in Summer Rainfall and Circulation in the Australasian Region: A Study Using Single-Forcing Climate Simulations*. Atmos. *Chem. Phys.*, 12, 6377–6404.

Santoso, S, (2017). *Statistik Multivariat dengan SPSS*, PT Elex Media Komputindo. Jakarta.

Schroth, G., Laderach, P., Dempewolf, J., Philpott, S., Haggar, J., Eakin, H., Castillejos, T., Moreno, J.G., Pinto, L.S., Hernandez, R., Eitzinger, A., Ramirez-Villegas, J., (2009). *Towards a climate change adaptation strategy for coffee communities and ecosystems in the Sierra Madre de Chiapas,*

Mexico. Mitig. Adapt. Strateg. Glob. Change 14, 605–625. https://doi.org/10.1007/s11027-009-9186-5

Selmar D, Bytof G, Knopp SE. (2008) *The Storage of Green Coffee (Coffea Arabica): Decrease of Viability and Changes of Potential Aroma Precursors*. Ann Bot 101(1):31-38.

Serrano. CEB & Castrillón. JJC. (2002). *Influência de la Altitud en la Calidad de la Bebida de Muestras de Café Procedente del Ecotopo 206 B en Colombia*. Cenicafé, 53:119-131.

Sharma, S. (1996). *Applied Multivariate Techniques*.Wiley, New York

Silva. E. A. F., M. DaMatta. C., Ducatti. A., Regazzi. J., dan Barros. R. S. (2005). *Seasonal Changes in Vegetative Growth and Photosynthesis of Arabica Coffee Trees. Field Crops Res*. 89: 349357.

Siswoputranto. P. S. (1993). *Kopi Internasional dan Indonesia*. Kanisius, Yogyakarta.

Speciality Coffee Association of America. (2009). *What Is Specialty Coffee?*. Speciality Coffee. Association of America. Retrieved from http://www.scaa.org/.

Speciality Coffee Association of America. (2015). *SCAA Protocols: Cupping Specialty Coffee*. Speciality Coffee Association of America. Retrieved from http://www.scaa.org/.

Spiller. G. A. (1999). *Caffeine*. Boca Raton London, New York Washington DC.

Sridevi, V., & Giridhar, P. (2013). *Influence of Altitude Variation on Trigonelline Content during Ontogeny of Coffea Canephora Fruit. Journal of Food Studies*, *2*(1), 62–74. https://doi.org/10.5296/jfs.v2i1.3747.

Sugiyono. (2012). *Statistika Untuk Penelitian*. Penerbit Alfabeta. Bandung.

Sumirat, U. (2008). *Dampak kemarau panjang terhadap sifat fisik biji kopi Robusta (Coffea canephora)*. Pelita Perkebunan 24(2): 80–94.

Supriadi, H., Randriani, E., & Towaha, J. (2016). *Korelasi Antara Ketinggian Tempat, Sifat Kimia Tanah, dan Mutu Fisik Biji Kopi Arabika di Dataran Tinggi Garut. Jurnal Tanaman Industri Dan Penyegar*, *3*(1), 45–52. https://doi.org/10.21082/jtidp.v3n1.2016.p45-52.

Supriadi, H. dan H. Nina. (2011). *Dampak Perubahan Iklim Terhadap Produksi jambu Mete dan Upaya Penanggulangannya*. J. Buletin RISTRI. 2(2): 175-186.

Suriani. (1997). *Analisis Kandungan Kafein Dalam Kopi Instan Berbagai Merek yang Beredar di Ujung Pandang*. FMIPA, Universitas Hasanuddin, Makassar.

Syah F. A, Saitoh S, Alabia I. D, Hirawake T. (2016). *Prediciting Potential Fishing Zones for Pacific Saury (Cololabis saira) with Maximum Entropy Models and Remotely Sensed Data. Fish. Bull*: 330-343.

Tavares. PD., Giarolla. A., Chou. SC., Silva. AJD., Lyra. AD, (2018). *Climate change impact on the potential yield of Arabica coffee in Southeast Brazil*. Reg Environ Chang 18:873–83. https://doi.org/10.1007/s10113-017-1236-z.

Team Cupper Gayo, (2017). *Standar Umum Pengujian Mutu Pada Biji Kopi*. MPKG. Takengon.

Tendall. D.M., Joerin. J., Kopainsky. B., Edwards. P., Shreck. A., Le. Q.B., Kruetli. P., Grant. M., Six. J. (2015) . *Food System Resilience: Defining the Concept*. Global Food Security 6, 17–23.

Tolessa K, Jolien D, Luc D, Pascal B. (2016). *Influence of Growing Altitude, Shade and Harvest Period on Quality and Biochemical Composition of Ethiopian Specialty Coffee*. J. Sci Food Agric. DOI 10.1002/jsfa.8114.

Turral, H., Burke J., Faurs, J. (2009). *Food Security and Agricultural Mitigation in Developing Countries. Food and Agriculture Organization Water Reports*. Rome, Italy. ISBN 978-92-95-5-106795-6.

UPTD BPSMB, (2019). Laporan Hasil Uji. Disperindag Aceh. Aceh Besar.

Usman. H., dan Purnomo. S. A., (2011). *Pengantar Statistika*. PT. Bumi Aksara. Yogyakarta.

Vaast, Bertrand B, Perriot JJ, Guyot B and Génard M. (2006). *Fruit Thinning and Shade Improve Bean Characteristics and Beverage Quality of Coffee (Coffea Arabica L.) Under Optimal Conditions*. J Sci Food Agric 86:197–204.

Van Der Vossen, H. A. M. (2009). *The Cup Quality of Diseaseresistant Cultivars of Arabica Coffee (Coffea arabica)*. Cambridge Journal Online 45 (03): 323-332.

Villers, L., Arizpe, N., Orellana, R., Conde, E., Hernandez, J., (2009). *Impacts of climatic change on coffee flowering and fruit development in Veracruz. Mexico.* Interciencia 34, 322–329.

Wang B, Yim SY, Lee JY. (2014). *Future Change of Asian-Australian Monsoon Under RCP 4.5 Anthropogenic Warming Scenario. Clim Dyn.* 42:83-100. Doi:10.1007/s00382-013-1769-x.

Watts C. (2016). *A Brewing Storm: The climate change risks to coffee* [Internet]. Sydney (AU): The Climate Institute. [diunduh 2016 Sep 1]. Tersedia pada: http://climateinstitute.org.au/verve/_resources/TCI_A_Brewing_Storm_FINAL_28082016_web.pdf.

Wei, F., Furihata, K., Koda, M., Hu, F., Kato, R., Miyakawa, T., Tanokura, M., (2012). *13C NMR-Based Metabolomics For The Classification Of Green Coffee Beans According To Variety And Origin. J. Agric. Food Chem.* 60, 10118–10125. https://doi.org/10.1021/jf3033057.

Winkler, A. (2014). *Chapter 10-Coffee, Cocoa and Derived Products (e.g. Chocolate) A2- Motarjemi, Yasmine. In H. Lelieveld (Ed.), Food Safety Management (pp. 251-282).* San Diego: Academic Press.

Wintgens, J.N. (2004). *Factors Influencings The Quality Of Green Coffee* In: Wintgens, J.N. (Ed.)*, Coffee: Growing, Processing, Sutainbale Production.* Wiley-VCH Verlag GmbH & Co. KgaA. Weinheim. P. 976.

Wintgens. N. J. (2012). *Coffee: Growing, Processing, Sustainable Production. A Guidebook for Growers, Processors, Traders, and Researchers.* Weinhem(GE): Wiley-VCH.

WIPO, (2017). '*What is Intellectual Property*?', Wipo Publication. Geneva: World Intellectual Property Organization, pp. 1-25. Doi: ISBN 978-805-1555-0.

Worku, M., Meulenaur BD. Duchateau, L., & Boeckx, P. (2018). *Effect of Altitude on Biochemical Composition and Quality of Green Arabica Coffee Beans Can be Affected by Shade and Postharvest Processing Method.* Food Research International. *105.* *278–285.* https://doi.org/10.1016/j.foodres.2017.11.016.

Yadessa, A., Burkhardt, J., Denich, M., Woldemariam, T., Bekele, E., & Goldbach, H. (2008). *Influence of soil properties on cup quality of wild arabica coffee in coffee forest ecosystem of SW Ethiopia*. In 22nd International Conference on Coffee Science (ASIC).

Yusianto., Dwi N. (2014). *Mutu Fisik dan Citarasa Kopi Arabika yang Disimpan Buahnya Sebelum di-Pulping. Pelita Perkebunan.* Jember.

Yusianto dan Mulato. (2002). *Pengolahan dan Komposisi Kimia Biji Kopi Pengaruhnya Terhadap Citarasa Seduhan.* Materi Pelatihan Uji Citarasa Kopi. Pusat Penelitian Kopi dan Kakao Indonesia, Jember.

Zhang, X., W. Li, B. Yin, P. Chen, K. Declan, X. Wang, K. Zheng and Y. Du. (2013). *Improvement of Near Infrared Spectroscopic (NIRS) Analysis of Caffeine in Roasted Arabica Coffee by Variable Selection Method of Stability Competitive Adaptive Reweighted Sampling (SCARS)*. J Elsevier Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy 114: 350–356.

Ziska, L., Bradley, B., Wallace, R., Bargeron, C., LaForest, J., Choudhury, R., Garrett, K., Vega, F., (2018). *Climate change, carbon dioxide, and pest biology, managing the future: coffee as a case study*. Agronomy 8, 152. https://doi.org/10.1007/s10909-012-0674-8.