

DAFTAR PUSTAKA

- Adler, P., Frey, L., Berger, A., Bolten, C., Hansen, C., & Wittmann, C. (2014). The Key to Acetate: Metabolic Fluxes of Acetic Acid Bacteria Under Cocoa Pulp Fermentation Simulating Conditions. *Applied Environmental Microbiology*, 4702-4716.
- Afoakwa, E. (2016). *Chocolate Science and Technology*. Chichester: Wiley-Blackwell.
- Alamilla, P., Laura, M., Juan, B., & Ricardo, G. (2017). Physicochemical Changes of Cocoa Beans During Roasting Process. *Journal of Food Quality*, 1-11. doi:10.1155/2017/2969324
- Anwar, R. (2005). *Meta Analisis*. Bandung: Fakultas Kedokteran Unpad.
- Apriyanto, M. (2018). Suksesi Mikrobial Terhadap Penurunan Etanol, Asam Laktat dan Asam Asetat Selama Fermentasi Biji Kakao. *Jurnal Teknologi Pertanian*, 7(2), 30-39.
- Apriyanto, M., & Rujiah. (2017). Penurunan Total Polifenol, Etanol, Asam Laktat, Asam Asetat dan Asam Amino Selama Fermentasi Biji Kakao Asalan dengan Penambahan Inokulum. *Jurnal Gizi dan Dietetik Indonesia*, 5(1), 1-8. doi:http://dx.doi.org/10.21927/ijnd.2017.5(1).1-8
- Apriyanto, M., Sutardi, S., Supriyanto, S., & Harmayani, E. (2017). Fermentasi Biji Kakao Kering Menggunakan *Saccharomyces cerevisiae*, *Lactobacillus lactis* dan *Acetobacter aceti*. *AGRITECH*, 302-311.
- Apriyanto, M., Sutradi, S., Harmayani, S., & Supriyanto, S. (2016, November). Perbaikan Proses Fermentasi Biji Kakao Non Fermentasi dengan Penambahan Biakan Murni *Saccharomyces cerevisiae*, *Lactobacillus lactis* dan *Acetobacter aceti*. *AGRITECH*, 36, 410-415. doi: http://dx.doi.org/10.22146/agritech.16764
- Ariefta, G., G.P, G. P., & A.A, D. A. (2016). Pengaruh Penambahan Ragi Tape dan Waktu Fermentasi Terhadap Karakteristik Pulpa Biji Kakao. *Jurnal Rekayasa dan Manajemen Agroindustri*, 4(2), 42-52.
- Ariyanti, M. (2017). Karakteristik Mutu Biji Kakao (*Theobroma Cacao L*) Degnan Perlakuan Fermentasi Berdasar SNI 2323-2008. *Jurnal Industri Hasil Perkebunan Vol. 12 No 1*, 34-42.

- Aryani, N. L., Yulianti, N. L., & Arda, G. (2018). Karakteristik Biji Kakao Hasil Fermentasi Kapasitas Kecil dengan Jenis Wadah dan Lama Fermentasi yang Berbeda. *Jurnal Biosistem dan Teknik Pertanian*, 2018.
- Beckett, S. (2009). *Industrial Chocolate Manufacture and Use*. Chichester: Wiley-Blackwell.
- Bertazzo, A., Stefano, C., Francesca, M., & Su, C. (2013). Composition of Cacao Beans. In W. R.R, & e. al, *Chocolate in Health and Nutrition* (pp. 105-117). Springer Science and Business Media. doi:10.1007/978-1-61779-803-0_8
- BSN. (2008). *SNI 2323:2008 tentang Biji Kakao*. Jakarta: Badan Standardisasi Nasional.
- Camu, N., De Winter, T., Verbrugghe, K., Cleenwerck, I., Takrama, J., Vancanneyt, M., & De Vuyst, L. (2007). Dynamics and Biodiversity of Lactic Acid Bacteria and Acetic Acid Bacteria Populations Involved in Spontaneous Heap Fermentations of Cocoa Beans in Ghana. *Applied Environmental and Microbiology*, 1809-1824.
- Cempaka, L., Aliwarga, L., Purwo, S., & Kresnowati, M. (2014). Dynamics of Cocoa Bean Pulp Degradation during Cocoa Bean Fermentation: Effects of Yeast Starter Culture Addition. *Journal of Mathematical and Fundamental Sciences*, 14-25.
- Corsetti, A., Perpetuini, G., Schirone, M., Tofalo, R., & Suzzi, G. (2012). Application of Starter Cultures to Table Olive Fermentation: An Overview on the Experimental Studies. (F. i. Microbiology, Ed.) *Food Microbiology*, 1-6. doi:10.3389/fmicb.2012.00248
- Crafack, M., Keul, H., Eskildsen, C., Petersen, M., Saerens, S., Blennow, A., . . . Nielsen, D. (2014). Impact of Starter Cultures and Fermentation Techniques on the Volatile Aroma and Sensory Profile of Chocolate. *Food Research International*. doi:10.1016/j.foodres.2014.04.032
- Crafack, M., Morten, B., Sofie, S., Morten, K., Andreas, B., Samuel, L., . . . Dennis S, N. (2013). Influencing Cocoa Flavour using *Pichia kluyveri* and *Kluyveromyces marxianus* in a Defined Mixed Starter Culture for Cocoa Fermentation. *International Journal of Food Microbiology*. doi:http://dx.doi.org/10.1016/j.ijfoodmicro.2013.06.024
- Darius, Y. (2016). *Perbandingan Produk Beras Sosoh dan Tidak Sosoh Dengan Pendekatan Meta Analisis*. Jakarta: Universitas Bakrie.

- De Vuyst, L., & Weckx, S. (2016). The Cocoa Bean Fermentation Process: From Ecosystem Analysis to Starter Culture Development. *Journal of Applied Microbiology*(121), 5-17. doi:10.1111/jam.13045
- De Vuyst, L., Timothy, L., Zoe, P., & Nicholas, C. (2010). The Functional Role of Lactic Acid Bacteria in Cocoa Bean Fermentation. In *Biotechnology of Lactic Acid Bacteria Novel Applications* (pp. 301-322). Blackwell Publishing.
- Galoozis, E. (2019, September 27). *USCLibraries*. Retrieved August 17, 2020, from Libraries FAQ: <https://libanswers.usc.edu/faq/129548>
- Ganeswari, I., Khairul, B., Amizi, M., & Sim, K. (2015). Effects of different fermentation approaches on the microbiological and physicochemical changes during cocoa bean fermentation. *International Food Research Journal*, 22(1), 70-76.
- Gutierrez, J. M., Cristian, B., Ilario, F. M., Marta, B., Paola, D., & Marcella, C. L. (2018). Dynamics and Biodiversity of Bacterial and Yeast Communities During The Fermentation of Cocoa Beans. *Applied and Environmental Microbiology*. doi:10.1128/AEM.01164-18
- Hernandez, C. F., & dkk. (2019). The Challenges and Perspectives of The Selection of Starter Cultures for Fermented Cocoa Beans. *International Journal of Food Microbiology* 301, 41-50.
- Holzappel, W. (2002). Appropriate Starter Culture Technologies for Small-Scale Fermentation in Developing Countries. *Journal Food Microbiology*, 197-212.
- <https://www.farming-program.com>. (n.d.). *Lindt & Sprungli Cocoa Farming Program*. Retrieved from Cocoa: Different varieties: <https://www.farming-program.com/en/cocoa-different-varieties>
- ISO. (2017). *ISO 2451:2017: Cocoa beans — Specification and quality requirements*. International Standard Organization.
- Jamili, Yanti, N. A., & Susilowati, P. E. (2016). Diversity and the role of yeast in spontaneous cocoa bean fermentation from Southeast Sulawesi, Indonesia. *Biodiversitas*, 90-95.
- Kadow, D., Niemenak, N., Rohn, S., & R, L. (2015). Fermentation-like incubation of cocoa seeds (*Theobroma cacao* L) - reconstruction and guidance of the fermentation process. *LWT - Food Science and Technology*, 357 - 361.
- Kongor, J., Hinneh, M., de Walle, D., Afoakwa, E., Boeckx, P., & Dewettinck, K. (2016, January 15). Factors in influencing quality variation in cocoa

- (Theobroma cacao) bean flavour profile — A review. *Food Research Journal*, 44-52. doi:http://dx.doi.org/10.1016/j.foodres.2016.01.012
- Kresnowati, M., & Febriami, H. (2015). Mapping the Effects of Starter Culture Addition on Cocoa Bean Fermentation. *ASEAN Engineering Journal Part B, Vol 5 No 1*, 25-37.
- Kresnowati, M., Lenny, S., & Mirra, A. (2013). Improvement of Cocoa Beans Fermentation by LAB Starter Addition. *Journal of Medical and Bioengineering*, 2(4), 274-278. doi: 10.12720/jomb.2.4.274-278
- Kustyawati, M., & Setyani, S. (2008). Pengaruh Penambahan Inokulum Campuran Terhadap Perubahan Kimia dan Mikrobiologi Selama Fermentasi Coklat. *Jurnal Teknologi Industri dan Hasil Pertanian*, 73-84.
- Kusumantara, K. N. (2018). *Perbandingan Bahan Penyalut Dalam Penentuan Karakteristik Produk Akhir dan Efisiensi Mikroenkapsulasi Flavor Dengan Pendekatan Meta-Analisis*. Jakarta: Universitas Bakrie.
- Lefeber, T., Zoi, P., William, G., Nicholas, C., & De Vuyst, L. (2012). On-farm Implementation of a Starter Culture for Improved Cocoa Bean Fermentation and Its Influence on the Flavour of Chocolates Produced Theorof. *Food Microbiology*, 30, 379-392. doi:10.1016/j.fm.2011.12.021
- Meryandini, A., Asrianti, B., & Titi, C. (2019). Peningkatan Kualitas Biji Kakao (Theobroma cacao L) Melalui Fermentasi Menggunakan Lactobacillus sp. dan Pichia kudriavzevii. *Jurnal Bioteknologi dan Biosains Indonesia*, 6(1), 11-19.
- Miguel, M., Reis, L., Efraim, P., Santos, C., Lima, N., & Schwan, R. (2016). Cocoa Fermentation: Microbial Identification by MALDI-TOF MS, and Sensory Evaluation of Produced Chocolate. *LWT - Food Science and Technology*, 77, 362-369. doi:10.1016/j.lwt.2016.11.076
- Misgiyarta, Fauzi, A., Syamsu, K., & Munarso, S. (2019). Pemilihan Starter Cair Unggul Untuk Fermentasi Biji Kakao. *Jurnal Penelitian Pascapanen Pertanian*, 19-24.
- Misnawi, Ariza, B., Noor, A., Resa, S., Fahrizal, & Fahrurrozi. (2018). Improvement of Small Scale Cocoa Fermentation Using Lactobacillus fermentum as Starter Culture. *Pelita Perkebunan*, 33, 203-210.
- Mother, D., Liberati, A., Tetzlaff, J., Altman, D., & Group, T. P. (2009). Preferred Reporting Items for Systematic Reviews and Meta Analyses. *PLoS Med*, 6(7). doi:10.1371/journal.pmed1000097

- Munarso, S. J., Kun, T., & Zahra, H. (2016). Pengaruh Penambahan Starter Mikroba Serta Pemerasan Pulp Terhadap Kondisi Fermentasi dan Mutu Biji Kakao (*Theobroma cacao* L.). *Jurnal Penelitian Pascapanen Pertanian*, 13(3), 156-166.
- Ooi, T., Ting, A., & Siow, L. (2020). Influence of Selected Native Yeast Starter Cultures on The Antioxidant Activities, Fermentation Index and Total Soluble Solids of Malaysia Cocoa Beans : A simulation Study. *Food Science and Technology*.
- Pereira, G., Jonatan, P., Dao, P., Vanete, T., Valcineide, O., Herve, R., . . . Carlos, R. (2017). Great Intraspecies Diversity of *Pichia kudriavzevii* in Cocoa Fermentation Highlights the Importance of Yeast Strain Selection for Flavor Modulation of Cocoa Beans. *LWT - Food Science and Technology*. doi:10.1016/j.lwt.2017.05.073
- Purwanto, E., Setyabudi, S., & Supriyanto. (2019). Aktivitas Mikrob Dalam Pulp Biji Kakao (*Theobroma cacao* L) Selama Fermentasi Dengan Penambahan Ragi Tape. *Jurnal Tanaman Industri dan Penyegar*, 21-32.
- Qin, X.-W., Jian-Xiong, L., Le-He, T., Chao-Yun, H., Fu-Peng, L., Shu-Zhen, H., & Ying-Hui, S. (2015). Characterization of Volatile Compounds in Criollo, Forastero and Trinitario Cocoa Seeds in China. *International Journal of Food Properties*, 2261-2275. doi:10.1080/10942912.2016.1236270
- Ramos, C., Disney, R., Maria, G., & Rosane, F. (2014). Impact of Different Cocoa Hybrids (*Theobroma cacao* L.) and *S. cerevisiae* UFLA CA11 Inoculation on Microbial Communities and Volatile Compounds of Cocoa Fermentation. *Food Research International*, 64, 908-918. doi:10.1016/j.foodres.2014.08.033
- Sabahannur, S., Netty, Alimuddin, S., & Nirwana. (2018). Study of Tape Yeast and Sucrose Addition to Cocoa Bean Fermentation (*Theobroma cacao* L.) on Small Scale. *Journal of Advanced Agricultural Technologies*, 5(4), 271-275. doi:doi: 10.18178/joaat.5.4.271-275
- Sandhya, M., Yallappa, B., Varadaraj, M., Puranaik, J., Jaganmohan Rao, L., Janardhan, P., & Murthy, P. S. (2015). Inoculum of The Starter Consortia and Interactive Metabolic Process in Enhancing Quality of Cocoa Bean (*Theobroma cacao*) Fermentation. *LWT - Food Science and Technology*. doi:10.1016/j.lwt.2015.09.002
- Santos, D., Rachel, P., Thalys, F., Eric, L., Adriana, C., Adriana, B., . . . Joao, D. (2019). Fermentation in Fine Cocoa Type Scavina: Change in Standard Quality as the Effect of Use of Starter Yeast in Fermentation. *Food Chemistry*. doi:10.1016/j.foodchem.2020.127110

- Santos, D., Rachel, P., Thalys, F., Eric, L., Adriana, C., Adriana, B., . . . Joao, D. (2020). Fermentation in Fine Cocoa Type Scavina: Change in Standard Quality as the Effect of Use of Starter Yeast in Fermentation. *Food Chemistry*, 1-15. doi:10.1016/j.foodchem.2020.127110
- Saunshi, Y., Mudrakola, V., Navin, K., & Pushpa, S. (2019). Starter consortia for on-farm cocoa fermentation and their quality attributes. *Preparative Biochemistry and Biotechnology*, 1-9. doi:https://doi.org/10.1080/10826068.2019.1689508
- Schwan, R., & Fleet, G. (2015). *Cocoa and Coffee Fermentation*. New York: CRC Press.
- Schwan, R., Gilberto, V., & Graham, F. (2015). Microbial Activities During Cocoa Fermentation. In R. Schwan, & H. F. Graham, *Cocoa and Coffee Fermentations* (pp. 129-183). Florida: CRS Press.
- Shelby, L. B., & Jerry, J. V. (2008). Understanding Meta-Analysis: A Review of the Methodological Literature. *Leisure Science*(30), 96-110. doi: 10.1080/01490400701881366
- Suliman, A. (2017). *Microbial Starter Cultures*. Mauritius: Lambert Academic Publishing.
- Visintin, S., Ramos, C., Batista, N., Dolci, P., Schwan, R., & Cocolin, L. (2017). Impact of *Saccharomyces cerevisiae* and *Torulospira delbrueckii* Starter Cultures on Cocoa Beans Fermentation. *International Journal of Food Microbiology*. doi:10.1016/j.ijfoodmicro.2017.06.004