

## DAFTAR PUSTAKA

- Abong, G. O., Shibairo, S., & Wanjekeche, E. (2016). Post-Harvest Practices, Constraints and Opportunities Along Cassava Value Post-Harvest Practices, Constraints and Opportunities Along Cassava Value Chain in Kenya. *Current Adekola, K. A.* (2016). Engineering Review Food Extrusion Technology and Its Applications. *Journal of Food Science and Engineering*, 6, 149–168.
- Adesina, B. S., & Bolaji, O. T. (2013). Effect of Milling Machines and Sieve Sizes on Cooked Cassava Flour Quality. *Nigerian Food Journal*, 31(1), 115–119.
- Afifah, N., & Ratnawati, L. (2017). Quality assessment of dry noodles made from blend of mocaf flour , rice flour and corn flour Quality assessment of dry noodles made from blend of mocaf flour , rice flour and corn flour. *IOP Conference Series: Earth and Environmental Science*, 101.
- Agarwal, S., & Chauhan, E. S. (2019). Extrusion processing: The effect on nutrients and based products. *The Pharma Innovation Journal*, 8(4), 464–470.
- Agroindustri.id. Mengenal Karakteristik dan Keunggulan Tepung Mocaf. <http://www.agroindustri.id/karakteristik-dan-keunggulan-tepung-mocaf-/amp/#>. Diakses pada 2 Juni 2022.
- Akhtar, J., Malik, S., Alam, M. A., Student, M. T., & Allahabad, S. (2015). Extrusion Technology used for novel Foods Production. *International Journal of Engineering Development and Research*, 3(3), 1–7.
- Alam, M. S., Kaur, J., Khaira, H., & Gupta, K. (2016). Extrusion and Extruded Products: Changes in Quality Attributes as Affected by Extrusion Process Parameters: A Review. *Critical Reviews in Food Science and Nutrition*, 56(3), 445–473.
- Anand, A., Dhaliwal, Y. S., & Verma, R. (2020). A Review on Food Extrusion Its Classification and Quality Attributes. *Indian Journal of Pure and Applied Biosciences*, 8(4), 707–714.
- Arana, A., & Arana, J. I. (2012). Physical Properties of Foods Novel Measurement Techniques and Applications. In *Physical Properties of Foods: Novel Measurement Techniques and Applications*. CRC Press, Taylor & Francis Group.
- ASABE Standard. (2006). Method of Determining and Expressing Fineness of Feed Materials by Sieving. *American Society of Agricultural and Biological Engineers*, ANSI/ASAE S319.
- Azima, F., Syukri, D., & Indrayenti, D. (2016). Utilization of Mixed Oyek Cassava, Corn Grits, Brown Rice and Soy Grits in the Production of Snack Extrusion. *Research Journal of Pharmaceutical, Biological and Chemical Sciences*, 7(1063), 1063–1069.
- Badan Standarisasi Nasional. (2015). *Makanan ringan ekstrudat*. SNI 2886.
- Bala, A., Gul, K., & Riar, C. S. (2015). Functional and sensory properties of cookies prepared from wheat flour supplemented with cassava and water chestnut flours Functional and sensory properties of cookies prepared from wheat flour supplemented with cassava and water chestnut flours. *Cogent Food & Agriculture*, 102(1), 1–7.
- Basavaraj, B. V., Saritha, N., Bharath, S., Deveswaran, R., & Madhavan, V. (2013).

- Vigna mungo mucilage - A natural polymer in the design of matrix based SR tablet of aceclofenac. *International Journal of Pharmaceutical Sciences Review and Research*, 21(1), 125–130.
- Bayata, A. (2019). Review on Nutritional Value of Cassava for Use as a Staple Food. *Science Journal of Analytical Chemistry*, 7(4), 83–91.
- Bayu, B., Aminah, S., & Nurhidajah. (2008). Karakteristik Fisik dan Organoleptik Sereal Berbasis Kecambah Jagung-Kedelai. *Teknologi Pangan*, 28–37.
- Bhople, S., & Singh, M. (2017). Chemical Science Review and Letters Effect of Iron Enrichment on Textural Properties of Rice Based Ashwagandha (Withania Somnifera) Fortified Extruded Snacks. *Chemical Science Review and Letters*, 6(23), 1468–1475.
- Bisharat, G. I., Oikonomopoulou, V. P., Panagiotou, N. M., Krokida, M. K., & Maroulis, Z. B. (2013). Effect of extrusion conditions on the structural properties of corn extrudates enriched with dehydrated vegetables. *Food Research International*, 53(1), 1–14.
- Bordoloi, R., & Ganguly, S. (2014). Extrusion Technique in Food Processing and a Review on Its. *Indian Journal of Scientific Research and Technology*, 2(1), 1–3.
- Brunatti, A. C. S., Garcia, E. L., Mischon, M. M., & Leonel, M. (2018). Gluten-free puffed snacks of rice and cassava. *Australian Journal of Crop Science*, 12(02), 185–192.
- Budi, F. S., Hariyadi, P., Budijanto, S., & Syah, D. (2013). Teknologi Proses Ekstrusi untuk Membuat Beras Analog. *Jurnal Pangan*, 22(3), 263–274.
- Carvalho, A. V., Bassinello, P. Z., Mattietto, R. de A., Carvalho, R. N., Rios, A. de O., & Seccandio, L. L. (2012). Processing and characterization of an extruded snack made from broken rice flour and broken common bean flour. *Brazilian Journal of Food Technology*, 15(1), 72–83.
- Chandresh, S., & Priya, S. (2020). Extrusion Cooking Technology in Food Processing – An Overview. *International Research Journal of Engineering and Technology*, 7(5), 4449–4458.
- Chinellato, M. M., Conejero, J., Marques, D. R., Oliveira, D. M., Clemente, E., & Monteiro, A. R. G. (2016). Physical-Chemical and Sensory Quality of Cassava Extruded Snack Added with Hibiscus Sabdariffa L. *Chemical Engineering Transactions*, 49(2014), 403–408.
- Chiwona-karlton, L., Afoakwa, E. O., & Nkonkola, C. (2015). Varietal diversity and processing effects on the biochemical composition, cyanogenic glucoside potential (HCNp) and appearance of cassava flours from South-Eastern African region. *International Food Research Journal*, 22(3), 973–980.
- Choton, S., Gupta, N., Bandral, J. D., Anjum, N., & Choudary, A. (2020). Extrusion technology and its application in food processing: A review Extrusion technology and its application in food processing: A review. *The Pharma Innovation Journal*, 9(2), 162–168.
- Chulaluck, C., Nipat, L., Waraporn, P., & Pisut, B. (2011). Optimization of Extrusion Conditions for Functional Ready-to-Eat Breakfast Cereal. *Food Science Technology*, 17(5), 415–422.
- Coutinho, L. S., Eduarda, J., Batista, R., Caliari, M., Soares, M., & Júnior, S.

- (2013). Optimization of extrusion variables for the production of snacks from by-products of rice and soybean. *Food Science and Technology*, 33(4), 705–712.
- CV. Surya Grain Indonesia. 2019. Products Surya Grain Indonesia. <https://www.suryagrains.com/products>. Diakses pada 2 Juni 2022.
- Dalbhat, C. G., Mahato, D. K., & Mishra, H. N. (2019). Effect of extrusion processing on physicochemical, functional and nutritional characteristics of rice and rice-based products: A review. *Trends in Food Science & Technology*, 85, 226–240.
- Ding, Q., Ainsworth, P., Tucker, G., & Marson, H. (2005). The effect of extrusion conditions on the physicochemical properties and sensory characteristics of rice-based expanded snacks. *Journal of Food Engineering*, 66, 283–289.
- Dogan, H., & Karwe, M. V. (2003). Physicochemical Properties of Quinoa Extrudates. *Food Science Technology International*, 9(2), 101–114.
- Falade, K. O., & Akingbala, J. O. (2011). Utilization of Cassava for Food. *Food Reviews International ISSN:*, 27, 51–83.
- FAOSTAT. 2021. *FAOSTAT Crops and Livestocks Product*. FAO. <http://www.fao.org/faostat/en/#data/QCL>. Diakses pada 25 September 2021.
- Fellows, P.J. (2000). *Food Processing Technology, Principles and Practice*. Woodhead Publishing Ltd. Cambridge.
- Ferrari, A. C., Leonel, M., & Mischon, M. M. (2014). *Physical properties of snacks made from cassava leaf flour*. 35(1), 317–326.
- Figura, L. O., & Teixeira, A. A. (2007). *Food Physics, Physical Properties - Measurement and Application*. Springer-Verlag Berlin Heidelberg.
- Gondek, E., Janczar-smuga, M., & Jakubczyk, E. (2017). High fiber sereal-vegetable snack-analysis selected physical and functional properties. *Problem Journals of Advances in Agricultural Sciences*, 15–27.
- Grasso, S. (2020). Trends in Food Science & Technology Extruded snacks from industrial by-products: A review. *Trends in Food Science & Technology*, 99, 284–294. <https://doi.org/10.1016/j.tifs.2020.03.012>
- Hagenimana, A., Ding, X., & Fang, T. (2006). Evaluation of rice flour modified by extrusion cooking. *Journal of Cereal Science*, 43, 38–46.
- Hernandez-Santos, B., Juárez-barrientos, J. M., Torruco-uco, J. G., Ramirez-Figueroa, E., Ramirez-Rivera, E. de J., Bautista-Viazcan, V. O., & Rodriguez-miranda, J. (2021). Physicochemical properties of extruded ready-to-eat snack from unripe plantain blends, pineapple by-products and stevia. *Nova Scientia*, 13(3), 1–24.
- Hunter, R.S. (1958). Photoelectric colour difference meter. *Journal of the optical Society of America*, 48, 985-995.
- Jabeen, A., Hassan, S., Masoodi, L., Ajaz, N., & Rafiq, A. (2018). Physico-Chemical Composition and Functional Properties of Blended Flour Obtained from Lentil, Pumpkin and Barley for Development of Extrudates. *Journal of Food Processing and Technology*, 9(1), 1–9.
- Jakubczyk, E., Gondek, E., & Tryzno, E. (2017). Application of novel acoustic measurement techniques for texture analysis of co-extruded snacks. *LWT* -

- Food Science and Technology*, 75, 582–589.
- Jan, S., Rafiq, S. I., & Saxena, D. C. (2015). Effect of Physical Properties on Flow ability of Commercial Rice Flour / Powder for Effective Bulk Handling. *International Journal of Computer Applications*, 3, 0975 – 8887.
- Jisha, S., Sheriff, J. T., & Padmaja, G. (2010). Nutritional , Functional and Physical Properties of Extrudates from Blends of Cassava Flour with Cereal and Legume Flours. *International Journal of Food Properties*, 13, 1002–1011.
- Jozinovic, A., Subaric, D., Ackar, D., Babic, J., Planinic, M., Pavokovic, M., & Blazic, M. (2012). Effect of screw configuration , moisture content and particle size of corn grits on properties of extrudates. *Croatian Journal of Food Science and Technology*, 4(2), 95–101.
- Jyothi, A. N., Sheriff, J. T., & Sajeew, M. S. (2009). Physical and Functional Properties of Arrowroot Starch Extrudates. *Food Engineering and Physical Properties*, 74(2), 97–104.
- Kardhinata, E. H., Purba, E., Suryanto, D., & Rusmarilin, H. (2019). Modified cassava flour ( MOCAF ) content of cassava ( *Manihot esculenta* CRANTZ ) in North Sumatera. *IOP Conference Series: Earth and Environmental Science*, 260, 1–5.
- Kareem, S. T., Adebawale, A. A., Sobukola, O. P., Adebisi, A., Obadina, O. A., Kajihausa, O. E., Mojisola, O., Sanni, L. O., Keith, T., Kareem, S. T., Adebawale, A. A., Sobukola, O. P., & Moruf, A. (2015). Some Quality Attributes of High Quality Cassava- Tigernut Composite Flour and Its Extruded Snacks Some Quality Attributes of High Quality Cassava-Tigernut Composite Flour. *Journal of Culinary Science & Technology*, 13(3), 242–262.
- Kartikasari, S. N., Sari, P., & Subagio, A. (2016). Karakterisasi Sifat Kimia, Profil Amilografi (RVA) dan Morfologi Granula (SEM) Pati Singkong Termomodifikasi secara Biologi. *Jurnal Agroteknologi*, 10(01), 12–24.
- Khanna, N., Singh, M., & Jain, P. (2019a). Effect of extrusion cooking on physical properties : A review. *International Journal of Chemical Studies*, 7(2), 1345–1348.
- Khanna, N., Singh, M., & Jain, P. (2019b). Types of Extruders used for Extrusion Cooking - A Review. *International Journal of Current Microbiology and Applied Sciences*, 8(4), 716–720.
- Kothakota, A., Jindal, N., & Thimmaiah, B. (2013). A study on evaluation and characterization of extruded product by using various by-products. *African Journal of Food Science*, 7(12), 485–497.
- Kokini, J.L, Chang C.N, Lai L.S.(1992). *The role of rheological properties on extrudates expansion*. In: Kokini, J. L., Ho, C. T. and Karwe, M. V. (Eds) Food Extrusion. Science and Technology, Dekkar, New York, 631-652.
- Kumar, S., Kumar, A., Kumar, S., & Kumar, A. (2018). Process Optimization for the Development of Ready to eat Corn grits. *Journal of Pharmacognosy and Phytochemistry*, 816–819.
- Kusumayanti, H., Handayani, N. A., & Santosa, H. (2015). Swelling Power water solubility of cassava and sweet potatoes flour. *Procedia Environmental Sciences*, 23, 164–167.
- Leonel, M, Garcia, E. L., Santos, T. P. R., Fernandes, D. S., & Mischam, M. M.

- (2019). Cassava derivatives in the preparation of unconventional gluten-free snacks. *International Food Research Journal*, 26(3), 801–809.
- Leonel, Magali, Freitas, T. S. De, & Mischon, M. M. (2009). Physical characteristics of extruded Cassava Starch. *Scientia Agricola*, 66(4), 486–493.
- Lu, H., Guo, L., Zhang, L., Xie, C., Li, W., & Li, K. (2020). Study on quality characteristics of cassava flour and cassava flour short biscuits. *Food Science & Nutrition*, 8, 521–533.
- Macho, O., Peciar, P., & Fekete, R. (2020). Analysis Of Static Angle Of Repose With Respect To Powder Material Properties. *Acta Polytechnica*, 60(1), 73–80.
- Marques, D. R., Berwig, K. P., Monteiro, C. C. F., Dalany, M., & Monteiro, A. R. G. (2017). Shelf Life Evaluation of Extruded Snacks Coated with Maize Starch to Eliminate the Use of Fats in the Flavoring Process. *The Italian Association of Chemical Engineering*, 57, ISSN 2283-9216.
- Marta, H., Suryadi, E., & Ruswandi, D. (2017). Chemical Composition and Genetics of Indonesian Maize Hybrids. *American Journal of Food Technology*, 12(2), 116–123.
- Mazlan, M. M., Talib, R. A., Mail, N. F., Taip, S., Chin, N. L., Sulaiman, R., & Shukri, R. (2019). Effects of extrusion variables on corn-mango peel extrudates properties, torque and moisture loss. *International Journal of Food Properties*, 22(1), 54–70.
- Mazlan, M. M., Talib, R. A., Taip, F. S., Ling, N., Sulaiman, R., Shukri, R., Zuhair, M., & Nor, M. (2020). Changes in the physical properties and specific mechanical energy of corn-mango peel extrudates. *CyTA - Journal of Food*, 18(1), 417–426.
- Minweyelet, M., Solomon, W. K., & Bultosa, G. (2021). Effects of extrusion operating conditions and blend proportion on the physicochemical and sensory properties of teff-rice blend extruded products. *Food Research*, 5(2), 173–183.
- Montagnac, J.A., Davis, C.R., Tanumihardjo, S.A. (2009). Nutritional value of cassava for use as a staple food and recent advances for improvement, *Compr. Rev. Food Sci. Food Saf*, 8 (3), 181–194.
- Mosibo, O. K., Ferrentino, G., Alam, R., Morozova, K., & Scampicchio, M. (2020). Extrusion cooking of protein-based products: potentials and challenges. *Critical Reviews in Food Science and Nutrition*, 1–35.
- Mustika, A. R., & Kartika, W. D. (2020). Formulation of yellow pumpkin cookies with mocaf (modified cassava flour) flour addition as a snack for the obese community. *Food Research*, 4, 109–113.
- Nagaraju, M., Tiwari, V. K., & Sharma, A. (2020). Effect of extrusion on physical and functional properties of millet based extrudates: A review. *Journal of Pharmacognosy and Phytochemistry*, 9(6), 1850–1854.
- Nath, A., & Chattopadhyay, P. K. (2007). Quality Attributes of High Temperature Short Time Air Puffed Ready-to-eat Potato Snacks. *International Journal of Food Properties*, 10, 113–125.
- Navale, S. A., Swami, S. B., & Thakor, N. J. (2015). Extrusion Cooking Technology for Foods : A Review. *Journal of Ready to Eat Food*, 2(3), 66–80.
- Navarro-Cortez, R. ., Hernandez-Santos, B., Gomez-Aldapa, C. ., Castro-Rosas, J.,

- Herman-Lara, E., Sanchez, M., Juarez-Barrientos, J. M., Antonio-Cisneros, C. M., & Rodriguez-miranda, J. (2016). Development of extruded ready-to-eat snacks using pumpkin seed (*cucurbita pepo*) and nixtamalized maize (*zea mays*) flour blends. *Revista Mexicana de Ingenieria Quimica*, 15(2), 405–422.
- Nielsen, S. S. (2010). *Food Analysis, Fourth Edition* (4th ed.). Springer Science Business Media.
- Oikonomou, N. A., Krokida, M. K., Oikonomou, N. A., & Krokida, M. K. (2011). Literature Data Compilation of WAI and WSI of Extrudate Food Products. *International Journal of Food Properties*, 14, 199–240.
- Olorode, O. O., & Sobowale, S. S. (2021). Evaluation of qualities of extruded snacks from yellow cassava flour substituted with processed sesame seed 's flour. *World Journal of Advanced Research and Reviews*, 10(1), 74–86.
- Olusegun, A. A., & Adeladun, A. (2016). Effect of extrusion conditions on cassava / soybean extrudates. *Food Processing & Technology*, 3(1), 237–245.
- Pansawat, N., Jangehud, K., Jangchud, A., Wuttijumngong, P., Saalia, F.K, & Eitenmiller, R. R. (2008). Effects of extrusion conditions on secondary extrusion variables and physical properties of fish, rice-based snacks. *LWT-Food Science and Technology*, 41(4), 632–641.
- Pardhi, S. D., Singh, B., Ahmad, G., & Dar, B. N. (2019). Evaluation of functional properties of extruded snacks developed from brown rice grits by using response surface methodology. *Journal of the Saudi Society of Agricultural Sciences*, 18(1), 7–16.
- Pathak, N., & Kochhar, A. (2018). Extrusion Technology: Solution to Develop Quality Snacks for Malnourished Generation. *International Journal of Current Microbiology and Applied Sciences*, 7(1), 1293–1307.
- Pathare, P. B., Opara, U. L., & Al-said, F. A. (2013). Colour Measurement and Analysis in Fresh and Processed Foods : A Review. *Food Bioprocess Technol*, 6, 36–60.
- Patil, R. T., De Berrios, J. J., Tang, J., Pan, J., & Swanson, B. (2005). Physical characteristics of food extrudates - a review. *2005 ASAE Annual International Meeting*, 1–17.
- Ramachandra, H. G., & Thejaswini, M. L. (2015). Extrusion Technology: A Novel Method Of Food Processing. *International Journal of Innovative Science, Engineering & Technology*, 2(4), 358–369.
- Rampersad, R., Badrie, N., & Comissiong, E. (2003). Physico-chemical and Sensory Characteristics of Flavored Snacks from Extruded Cassava / Pigeonpea Flour. *Journal of Food Science*, 68(1), 363–367.
- Ranum, P., & Pe, J. P. (2014). Global maize production, utilization, and consumption. *Annals of The New York Academy of Sciences*, 105–112.
- Rao, B. D., Suneetha, A., Kiranmai, E., Srenuja, D., & Tonapi, V. A. (2018). Development of multi millet based extruded snack food. *International Journal of Chemical Studies*, 6(4), 1748–1752.
- Reddy, M. K., Kuna, A., Devi, N. L., Krishnaiah, N., Kaur, C., & Nagamalleswari, Y. (2014). Development of extruded Ready-To-Eat ( RTE ) snacks using corn, black gram, roots and tuber flour blends. *Journal Food Science Technology*.
- Rodriguez-miranda, J., Herman-lara, E., Eugenia, C., & Sanchez, M. (2011).

- Development of extruded snacks using taro ( *Colocasia esculenta* ) and nixtamalized maize ( *Zea mays* ) flour blends. *LWT - Food Science and Technology*, 44, 673–680.
- Saeleaw, M., & Schleining, G. (2010). Effect of blending cassava starch , rice , waxy rice and wheat flour on physico-chemical properties of flour mixtures and mechanical and sound emission properties of cassava crackers. *Journal of Food Engineering*, 100(1), 12–24.
- Sahin, S., & Sumnu, S. G. (2006). *Physical Properties of Foods*. Springer Science Business Media.
- Santoso, A., Wibisono, Y., & Warsito, H. (2013). Pengembangan Proses Pembuatan Beras Tiruan Berbasis Umbi Lokal dengan Memanfaatkan Ekstruder Ulir Tunggal. *Jurnal Ilmiah Inovasi*, 13(2), 138–144.
- Seker, M. (2005). Selected properties of native or modified maize starch/soy protein mixtures extruded at varying screw speed. *Journal of the Science of Food and Agriculture*, 85(7), 1161–1165.
- Selani, M. M., Brazaca, S. G. C., Dias, C. T. dos S., Ratnayake, W. S., Flores, R. A., & Bianchini, A. (2014). Characterisation and potential application of pineapple pomace in an extruded product for fibre enhancement. *Food Chemistry*, 163, 23–30.
- Seth, D., Badwaik, L. S., & Ganapathy, V. (2015). Effect of feed composition , moisture content and extrusion temperature on extrudate characteristics of yam-corn-rice based snack food. *Journal Food Science Technology*, 52(3), 1830–1838.
- Shevkani, K., Singh, N., Rattan, B., Pal Singh, J., Kaur, A., & Singh, B. (2019). Effect of chickpea and spinach on extrusion behavior of corn grit. *Journal of Food Science and Technology*, 56(4), 2257–2266.
- Singh, R. P., & Heldman, D. R. (2009). *Introduction to Food Engineering, Fourth Edition* (4th ed.). Academic Press, Elsevier Inc.
- Singha, P., Singh, S. K., & Muthukumarappan, K. (2018). Physicochemical and nutritional properties of extrudates from food grade distiller ' s dried grains , garbanzo flour , and corn grits. *Food Science and Nutrition*, 6, 1914–1926.
- Sobota, A., & Rzedzicki, Z. (2009). Effect of the extrusion process of corn semolina and pea hulls blends on chemical composition and selected physical properties of the extrudate. *International Agrophysics*, 23, 67–79.
- Statista. 2022. Snack Food Indonesia. <http://www.statista.com/outlook/cmo/food/confectionery-snacks/snack-food/indonesia>. Diakses pada 3 Juni 2022.
- Subagio, A., & Windrati, W. S. (2012). Pengaruh Komposisi MOCAF (Modified Cassava Flour) dan Tepung Beras pada Karakteristik Beras Cerdas (Effect of Composition Mocaf (Modified Cassava Flour) and Rice Flour on Characteristics of Beras Cerdas). *Jurnal Pangan*, 21(1), 29–38.
- Sumardiono, S., Heny, B., Novian, K., Agung, I., Puti, F., & Heri, P. (2021). Influence of composite flour constituents and extrusion temperature in the production of analog rice. *Food Science and Nutrition*, 9, 4386–4394.
- Sutanto, M. Y., Wahab, W., & Shaleh, I. (2021). Pengukuran kinerja mesin ekstruder 160 pada produksi kabel medium voltage (mv) dalam fase outer sheating. *Jurnal Penelitian Dan Aplikasi Sistem & Teknik Industri*, 15(3), 282–290.

- Tatsabong, L. T., & Ryu, G. (2018). The Effect of Corn Flour Addition on the Physico-chemical Properties of Extruded Cassava Starch. *Food Engineering Progress*, 22(3), 220–227.
- Thymi, S., Krokida, M. K., Pappa, A., & Maroulis, Z. B. (2005). Structural properties of extruded corn starch. *Journal of Food Engineering*, 68, 519–526.
- Triyono, B., Handoyo, S., & Laili, N. (2019). Analysis for Development of Mocaf-Based Functional Food Industry in Indonesia. *Journal of Socioeconomics and Development*, 2(2), 73–87.
- Tumwine, G., & Asiimwe, A. (2019). Effect of barrel temperature and blending ratio on the sensory and physical properties of cassava- extruded snacks on the sensory and physical properties of. *Cogent Food & Agriculture*, 5(1), 1–8.
- Varsha, K., & Mohan, S. (2016). Extruded Product Quality Assessment Indices: a Review. *International Journal of Agriculture Sciences*, 8(54), 975–3710.
- Victoriano, L. G., Vera, N. G., Guerrero, L. A. C., Nicanor, A. B., Simental, S. S., Pérez, J. J. C., González, L., Vera, N. G., Guerrero, L. A. C., Nicanor, A. B., Simental, S. S., Pérez, J. J. C., & Lira, A. Q. (2019). Physical – chemical characterization and antioxidant properties of extruded products made from mixtures composed of corn grits and red potato flour ( *Oxalis tuberosa* ). *CyTA - Journal of Food*, 17(1), 69–77.
- Wanjala, W. N., Mary, O., & Symon, M. M. (2020). Influence of Feed Rate , Moisture and Mixture Composition from Composites Containing Rice ( *Oryza sativa* ), Sorghum [ *Sorghum bicolor* ( L. ) Moench ] and Bamboo ( *Yushania alpina* ) Shoots on Physical Properties of Extruded Flour and Mass Transfer. *Food and Nutrition Sciences*, 11, 807–823.
- World Health Organization (2016). *Fortification Of Maize Flour and Corn Meal with Vitamins and Minerals*. World Health Organization.
- Yadav, K. C., Mishra, P., Dhungana, P. K., & Rajbanshi, R. (2015). Effects of incorporation of cassava flour on characteristics of corn grit-rice grit-chickpea flour blend expanded extrudates. *African Journal of Food Science*, 9(8), 448–455.
- Yeh, A., & Jaw, Y. (2014). Effects of Feed Rate and Screw Speed on Operating Characteristics and Extrudate Properties During Single-Screw Extrusion Cooking of Rice Flour Effects of Feed Rate and Screw Speed on Operating Characteristics and Extrudate Properties During Single-Screw E. *Cereal Chemistry*, 76(2), 236–242.
- Yousf, N., Nazir, F., Salim, R., Ahsan, H., & Sirwal, A. (2017). Water solubility index and water absorption index of extruded product from rice and carrot blend. *Journal of Pharmacognosy and Phytochemistry*, 6(6), 2165–2168.
- Yu, C., Liu, J., Tang, X., Shen, X., & Liu, S. (2017). Correlations between the physical properties and chemical bonds of extruded corn starch enriched with whey protein concentrate. *Royal Society of Chemistry*, 7, 11979-11986.
- Zaalouk, A.K., & Zabady, F. I. (2009) Effect of Moisture Content on Angle of Repose and Friction Coefficient of Wheat Grain. *Misr Journal of Agricultural Engineering*, 26(1), 418-427.
- Zhou, Y.C., Xu, B.H., & Yu, A.B. (2017). Numerical investigation of the angle of repose of monosized spheres. *The American Physical Society*, 64, 021301.