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Acceptability of Pili Pasta

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ABSTRACT

The study appraised the acceptability of pili pasta in the 2nd District of Albay. It determined the status of pili products in the 2nd district of Albay, Philippines, the level of Acceptability, along with appearance, aroma, texture, and taste, the SWOT analysis and challenges encountered in its production, and Marketability along with the product, promotion, price, place and people, likewise, the significant agreement on the rank order of its Acceptability and Marketability. It is substantial to the Department of Tourism (DOT), food industry, culinary professors, and culinary students. It used descriptive-inferential and experimental methods in determining the responses from 176 respondents in 4 groups. Findings revealed that the most known pili products are sweets and candies. The product was analyzed using the SWOT analysis and is highly acceptable in terms of appearance, aroma, texture, and taste. It was also considered marketable for its product, promotion, price, place, and people. The four groups of respondents significantly agreed on the Acceptability of pili pasta when it comes to taste.

While they disagree significantly concur on its Marketability for the reason that different categories of respondents have different perspectives when it comes to marketing strategy to use in promoting the product. Therefore, pili pasta is acceptable defending in its location of marketing it.

Keywords — Business, Innovation, Acceptability, Marketability, descriptive-inferential design, Philippines

INTRODUCTION

Pasta was considered a staple food for many countries around the world. There is a considerable increase in popularity because of its nutritional aspects. (Ong et al., 2014). Fiber-enriched pasta could be produced by adding up to 15 percent of dietary fiber into regular semolina-based pasta formulation, leading to acceptable products with matching characteristics of texture and color compared to commercial products (Li, et al., 2019).

According to Prabhasankar (2010), Pasta can be made with the use of semolina, durum, flour, corn, rice, wheat, or a mixture of everything, with water. Pasta can also be supplemented and fortified. In the current years, most ingredients and add-ons have been produced to enhance the quality of the pasta product from durum and aestivum wheat.

For those people who are gluten intolerant, pasta is a suitable and demand product for them. Nonetheless, few have tackled about sensory analysis and acceptability of pasta noodles made from the variety of Andean corn, capia, and cully from Argentina. For the Celiac and non-Celiac group (Gimenez et al., 2015). Southern Italy cultivated five durum wheat considered conventional cropping to produce quality pasta products. Traditional cropping and organic farming were used to evaluate the agronomic, technological sanitary of grains, and the sensory quality of the pasta. Organic agriculture was assessed as unsatisfactory when it comes to quality compared to conventional cropping. Saragulla appears to be the best yield in quality pasta in all crop experiments.

Innovation is creativity in action and all about practical imagination to make new ideas useful. Change is essential to be learned but frustrating at times because of inexperienced and requires courage to transform ideas into reality. Psychologists attest that ingenuity is three different things. First is thinking, second is feeling different, and lastly, focused and committed (Mckeown, 20014).

In coping with challenges, innovation is just an opportunity, but a pre-conditioned for success. The change supports small and medium enterprises

(SME's). And recognize as major essential to indemnify and to sustain the combative aspects of the food sector (Galanakis, 2016). Jolliffe (2019) deliberate about the relevance of the identified challenges in the region on the development of food tourism scenario on its authentic and commodified, commodity development, and culinary tourism. These movements resulted in two instances resulting in studies about food tourism products such as hot spring-related cuisine in Japan and cooking schools in Thailand. These instances are examined on a basis for its modification, specifically in cases that the tourist experiences were overwhelming due to the modification and sustainability that brought major changes in the food tourism industry.

Nuts, famous around the world, were described as a hard-shelled seed, with the oily kernel that is mostly used by humans for consumption, whether for snacks or cooking. Nuts can be eaten as whole-shelled nuts, blanched, and if roasted, may be produced as peanut butter. Most nuts, except for peanuts, are born on trees. Nuts have high protein and fat content and low in carbohydrates. Nuts are composed of amino and fatty acids, vitamins with the level of glucose (Othmer, 2007). The world is now using different types of flour, such as Green Banana Flour (GBH). The article discussed that using various ingredients for a meal such as from fruits, vegetables, nuts, and wheat will produce a product that is different in texture, color, flavor, and density. (Wang, Zhang, & Mujumdar, 2012).

The article imparted that when using different flour such as Green Banana Flour (GBF) and other fruit, vegetables, nuts, and wheat flour will make a huge difference in texture, density, color, and flavor, which will enhance the product's nutritional values. Quantity counts, innovation a new method that requires a lot of attempts and processes to produce quality innovative results or products. New techniques and methods were discovered with every failure experience and experiment. Proficiency in innovation will not guarantee the success of a new innovative product (Kuczmarski, 1996).

In the old world, pili is grown and known as an ornamental or just a simple decoration—the example of the countries that use pili as ornaments are Indonesia and Malaysia. In the Philippines, pilus is commercially produced and regard pili as a priority crop. Pili nuts are endemic in some regions in the country, such as in Bicol Region and some in the Palawan area. The Bicol Region, with the provinces of Albay, Camarines Sur, and Norte, Sorsogon, and Masbate, emphasized that 80% of pili production comes from this area. The large proportion crop up from Sorsogon provinces and tag pili nut as "commodity champion (Coronel, 1996).

Pili nut with the scientific name Canarium ovatum with 600 species in the Burseraceae family is native in the Philippines. And wild grows in the southern part of the country. Pili trees that grow pili fruit that is a drupe, 4 to 7cm long, and 2.3 to 3.8 cm in diameter and weighs 15.7 to 45.7 g. Pili nuts can be eaten raw, blanched, and fried. Pili is popular in Bicol as a pasalubong product as sweets. Some use pili kernel with chocolates, an add-on to baked products, and ice cream making. Pili nut kernel is the essential outcome from pili composed of 8% carbohydrates in contrast for the fruit to contain 70 %fat (Montevirgen et al., 2002).

With the vast potential seen in the country's prized pili tree, the Philippines, a large consumer market of beauty and personal care products, can now have the chance at the global cosmetic goods industry. The Tan family from Bicol, the owner of the brand Pili beauty, wanted to prove that cosmetics made from pili pulp oil-based beauty products get a shot in the cosmetic market. (Mark Anthony D. Toldo)

From the cited literature, the researchers experimented with making pili nut flour in making pasta noodles. Hence, this research will developed and evaluate pili nut flour as an innovative take on in making pasta noodles and used the pili nut flour as an alternative ingredient in producing pasta.

FRAMEWORK

The framework emphasized that the institutional implications of the study will encourage the food industry to create a more innovative product to help the government office to promote the food industry to produce an innovative product using native products of Albay, Healthy food production for the entrepreneurs. For the community, they will be able to create a product to be considered a food destination in Albay, which will serve as an inspiration to create new products using local ingredients and; to add more ideas in enhancing and upgrade the flavor of the food that is out of the ordinary.

OBJECTIVES OF THE STUDY

The study determined the Acceptability of pili nut flour as the main ingredient in making pili pasta. Specifically, 1) it learned the status of pili products in the 2nd District of Albay along; a. Candies/sweet products, b. Beauty products, and c. Pili oil. 2) Analyzed the level of acceptability of pili pasta along; Appearance,

Aroma, Texture, and Taste. (compared to ordinary pasta). 3) determined the Strengths, Weaknesses, Opportunities, and Threats (SWOT) ` analysis of the pili pasta. 4) Evaluated the challenges encountered, 5) marketability such as Product, Promotion, Price, Place, and People. 6) A significant agreement was concluded to determine the Acceptability of the product to the market.

The researchers hypothesized that the rank was insignificant among the groups of respondents on the acceptability and marketability of pili pasta. Making pasta out of pili nut flour is complicated but possible.

As claimed by Marc Vetri (2015), there are different types of flour can be used in making pasta noodles. Most of them are wheat flour that is commonly found in grocery stores, namely, Tipo 00, durum, semolina, whole-wheat, and stone ground. Some were from non-wheat flour-like oats, buckwheat, chestnut, almond, pistachio, and corn. Nevertheless, no single meal is perfect for making pasta noodles. As discussed by Kaur, Sharma, Nagi & Dar (2012), among cereals, only wheat is considered to be the most suitable for the manufacturing of pasta. This has the specific reasons for the protein content, and the properties of gliadin and glutenin, properties required to form a viscoelastic complex called gluten. Prabhasankar, P. (2010) observed that spaghetti could obtain protein and high lysine by adding 35% of soy flour without an adverse effect with its texture and color. It was reported that using soya and wheat flour in making pasta noodles can shorten the cooking time than usual.

The effect of supplementation of lasagne using chickpea flour as economical and known for its nutritional and highly protein stable, revealed that using chickpea flour than the wheat flour has a huge difference, from the nutritional value and content, and the same with texture and cooking process of the product. According to Sanni et al. (2007), instant noodles produced from composite flour were different form each other. Based on observation, using cassava as flour in making noodles increase the carbohydrates and fiber content and decrease in protein and fat content discusses the difference between using cassava as flour and how it increase in carbohydrates, fiber content and decrease in calories such as protein and fat. Their findings revealed that using cassava is possible in making a different kind of flour other than wheat flour that is popular in the market, and that has been used in food production in the food industries.

As claimed by Jessup, A (2001), Consumers, firms, third-party entities and governments, all play a role in determining which of many foods attributes and described in food labels can help consumers to use their purchasing power to the fullest. With this legal aspect in food innovation, consumers will know and

can purchase a better product when it comes to nutritional values, pricing, and packaging. This article discussed the importance of legal aspects when we talk about food production. It gives security to entities such as consumers, private organizations, government, and international organizations.

Based on Ma (2013) emphasized that it is better to analyze legal and regulatory aspects, general frameworks, identify fundamental mainstays and functions to have an effective traceability system. The study projected that it is better to have legal and regulatory aspects, especially in the food industry, for a better traceability system. Such as analyzing assessment criteria, bar codes, and technical resources mostly to new products.

Discovery from the study of Schaafsma and Kok (2005), with regards to innovation, the product should be represented both in terms of technology and commerce for Italian Food Companies, and the segmentation of consumers likes in young consumers. The role of acceptance of a new food within innovation varies from different culture and education. It also implies the need to identify highly differentiated marketing strategies.

Prahalad (2012) identified the Bottom of the Pyramid (BOP) market as a new source of radical innovation. Managerial attention should focus on creating awareness, access, availability, and availability of "4A's". With 4A's, managers can create an existing environment for innovations. Findings revealed that change needs full attention and support from the top management, mainly the managerial position, and should focus on 4A's awareness, access, affordability, and availability. Because of this, the external constraints can be utilized to build innovation.

Along with the Acceptability of genetically modified cheese presented as real product alternatives by Bech-Larsen, T. And et al. (2002), it was conceptualized to test the acceptability of genetically modified (gm) products when presented as real product alternatives. This study is somehow to the new product that is extraordinary or unusual for them. As stated by Imram (1999), appearance plays the essential aspects in influencing consumer's perceptions and acceptance of food products. The texture and flavor are equally crucial in consumers' perception, but "first taste is almost always with the eyes." Besides, appearance can have a halo effect, which modifies subsequent perception and food acceptability.

As predicted by Millena and Sagum (2018) stated about the nutritional, physical, and fatty acid assessments of the pulp and seven (7) varieties were included. Pili nut contains 67.2 – 74.1% fat, 9.97 % dietary fiber, 13.2% protein, and 749 cal per 100g energy. The said fact about pili nut was used by the researcher to validate the product and its nutritional content.

This study discusses the importance of the appearance of one product, because as others would say, "We eat with our eyes." Means, you cannot force someone to eat something that is not pleasing in the eyes. The expected outputs of the study would be the production of new products that can be an innovation to add to the gastronomy/food destination in the 2nd District of Albay in the Bicol Region. This study will help to focus on making an innovative product using local ingredients of the region.

This study on food innovation needed to follow a framework in any existing theory. The researchers' considered this an experiment on food processing, which is why the researcher needs to evaluate the said innovation. Diffusion of Innovation (DOI) theory developed by E.M Rogers in 1962, originated in communication to explain how, over time, an idea or product gains momentum and diffuses (or spread) through a specific population or social system. The result of this diffusion is that people, as a part of a social network, adopt a new idea, behavior, or product. Adoption means that a person does something differently than they have previously purchased. The key to adoption is that the person must perceive.

The study was anchored to the diffusion of innovation because the product that will be innovated is a pili pasta that is made from wheat flour. With this study, the pasta will be made by a pili flour. As an innovative product, relative advantage, compatibility, complexity, trialability, and observability are the crucial factors to consider in product innovation. Before deciding to make a product, it should have a relative advantage to the ones that are already in the market. And the product should all be compatible for it to work correctly to produce the output expected for the product; because of its oily texture, pili pasta is hard to incorporate into other ingredients to become pasta noodles, trialability, in an experiment in food it has trial and error phase just like in producing the pili pasta; observability, upon trial period of the product observation is necessary for a successful output of the experiment. For the same reason that this study used system theory, product innovation is also a system. The ingredients in making pasta are the input, the process will be the procedures in making pili pasta, and the output would be the pili pasta itself.

The scope of the study focused on the status of pili pasta products in the 2nd district of Albay Province, comprising (1) city and three (3) municipalities that are located in the Bicol Region. It will also analyze the Acceptability of pili pasta noodles along with the Appearance, Aroma, Texture, and Taste. Distinguish the challenges that may be encountered in the production of the pili pasta noodles.

This study ranged to all one (1) city, and three (4) municipalities of Albay Province is located in the Bicol Region. With respondents from the employees of the Department of Tourism (DOT), local tourists, pasalubong store owners, and local restaurant owners. And this study was limited to Acceptability, Marketability, and making pasta out of pili flour was introduced in the 2nd district of Albay. The study's timetable to finish this study was before December 12, 2019.

This study is relevant to the following stakeholders that can be a direct resource in supporting the innovation, such as the Department of Tourism, the Food industry, Future researchers, Culinary Professors, and Culinary students.

METHODOLOGY

Research Design

The research method used in this study was the descriptive-inferential and experimental methods of research. Relating to Garcia's definition, a descriptive way is a study that obtains facts about existing conditions of detaches significant relationships between current phenomena. At the same time, the inferential process is to attempt to apply the conclusions that were obtained from the experimental study.

Instrumentation

The questionnaire were devised based on the objectives of the study. The respondents were chosen from the list of businesses that were registered to the business office of the city and the municipalities and DOT list of tourist that visits the different towns and one (1) capital of the 2nd District of Albay Province. There were One hundred sixty (160) participants, with one hundred (100) came from tourists, ten (10) local government units (DOT), and fifty (50) from private sectors.

Data Gathering

In the event of gathering the data, first, the pili pasta noodles. Next would be securing a letter for approval to the DOT administration and to the office of the mayor to all the municipalities of the 2nd district and to (1) city, which is the Legazpi city to get the information needed and to conduct a survey. The questionnaire contains a short letter to the respondents. The researcher personally administered the distribution of the inquiry to the respondents after giving them the sample of the pili pasta dish for them to taste get their evaluation of the Pili

pasta. Immediately after they answered the questionnaire, the questionnaire were retrieved by the researcher. Then it was analyzed and interpreted after using the statistical tools.

The statistical tools used was based according to the type and nature of the objectives. Frequency count, ranks, Kendall Coefficient of Concordance W, and chi-square test was used to test the validity of the research.

RESULTS AND DISCUSSION

The more popular product that was made from pili are the candies/sweet products. Findings indicated that there are also beauty products made from pili pulp oil, and it is the main ingredient for the pili beauty product. A demographic profile is essential to determine the status of the pili pasta. The study would help to encourage business proprietors to produce more products rather than sweets using the pili nut. With this, it could help the market to have more farmers to harvest pili so that the supply would increase. With the increased amount, it meant a lower price for the pili nut. And pili pasta could be one of the examples of the product of pili nut that can be categorized as a gourmet product.

On the Acceptability of the pili pasta, from the respondents coming from the Department of Tourism, Pasalubong store owner, local tourists, and Restaurant owners and employees, signifies that when it comes to the appearance, aroma, texture, and taste of the pili pasta that were being tested, the respondents emphasized that pili pasta is highly acceptable with the average ranging from 2.5 to 3.0. In terms of appearance, the data stated that the highest on the rank was that the pasta is delicious. With aroma**,** the respondents believed that they find pili pasta aromatic as it ranked number 1 with an average of 2.74. On texture, creaminess has the highest rating with 2.56. And lastly, the taste, which is the vital aspect of the product, respondents believed that pasta is tasty with the highest rank from the data that garnered an average of 2.77. Analyzing the acceptability rate of the product in the market, the more successful the product will be. In business, the acceptability of products means more purchase of the product in the future. Purchasing is related to sex, education, income, and the number of years in the business for the restaurant owner.

The data projected that the results vary from the demographics of the respondents, and every category had their perspective with regards to the appearance, aroma, texture, and taste.

The product was analyzed based on Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis. Innovation means the adoption of new processes,

services, and products, which vary among different individuals and their demographic characteristics. As claimed by Pons, F (1999), to segment customers has significant importance on consumer's predisposition in adopting the new product or innovation. And segmentation is an essential tool for marketing.

The study of Munuera-Aleman (2004) predicted a go/no go criteria have five groups' dimensions. First, the strategic fit, which explains that there is a particular strategy on a particular product that cannot be utilized on the other product. Second, technical feasibility, the second important dimension because it will be the assessment on how to deliver the product or services to the end-user. The third will be customer acceptance, which is essential to a business that the product produced by the company will be accepted by the customers to earn a profit, a profit that every business needs. Fourth is the market opportunity. This means that in business, every product has the market opportunity; to make it big with innovation and marketing strategy.

The process of accepting or rejecting food is a multi-level nature. People vary their choices to their orientation to food. Sensory characteristics are not just the basis for consumer's responses to the product. There are other linked factors, like previously acquired information, past experiences, beliefs, and attitudes.

The idea of Arifin et al. (2019) and Idris (2012) along Strength, Weakness, Opportunities, and Threat (SWOT) analysis were used for better projection of the result of the study to identify and anticipate the factors that can affect the production and Marketability of pili pasta.

Based on the fact mentioned above and the data collected by the methodology, it was possible to create a SWOT analysis to determine the forces that can be a hindrance for the pili pasta product to make it in the food business. SWOT analysis can be noted in Table 3.

In view the scenarios of Pili pasta as a new innovative product by SWOT analysis above, it can determine the following:

Strengths

1. New and innovative product made of pili nut that is popular as a pasalubong product of the tourist as sweets, and can be introduced as pili pasta that can be categorized as a portion of gourmet food.
2. Since pili pasta is fresh pasta, it can be cooked for a short period, compared to the dry pasta found in the market.
3. The Pili pasta being different is an advantage because it is made from the an unusual ingredient for pasta, which is the pili nut flour, unlike pasta

being found from the market that is made from wheat, corn, and all-purpose flour.

Weakness

1. Promotion of the product, pili pasta is new that doesn't have a reputation compared to pasta products in the market.
2. Fresh pili pasta has a shorter life span, unlike the other dried pasta product.
3. Despite pili, pasta is an innovation, as different as it can be means weakness for the product for the reason that not everyone can adapt to change.

Opportunities

1. Pili pasta, as an innovative product, has a huge advantage to make it in the gastronomical/food destination in the province of Albay.
2. Pili pasta can be an addition to the food destination in the local tourism of the Bicol Region.
3. Pili pasta business can open more opportunities to give employment to the pili farmers. More pili farmers meant a more sustainable supply of pili nut.

Threat

1. Despite the abundance of pili trees in the Bicol Region, with fewer farmers harvesting pili nuts, the supply of pili nuts is low, and the price is high.
2. Competition with known pasta products in the market is stiff for pili pasta.
3. Different demographics of people means different food orientation.

The challenges that may be encountered in the production of the pili pasta; delved that the pasta is a very complicated dish, to the main ingredient which is the pili nuts that as of now is expensive in the market with Php700.00 per kilo, to roast it to the right texture to mix to other ingredients like all-purpose flour, eggs, and salt. Have it grind in the market like peanut butter, so it will incorporate appropriately with the other parts. Finally, the rolling of the pili pasta dough is difficult in the pasta maker because of its oily texture. It needed to go in a rolling pin before rolling it in a pasta maker.

While on the Marketability of pili pasta, as stated according to the findings that were suggesting different types of marketing strategies in terms of product,

promotion, price, place, and people. The different categories of respondents that, according to the data, marketability of pili pasta in the 2nd District of Albay, is highly acceptable. From the product category, respondents prefer the product should have high quality. And also, with the promotion category, the majority of the respondents think that social media would be a highly acceptable promotional strategy because of our technology era that is dependent on the internet.

It is also clear from the data of the price category that the respondents agreed that price bundling is highly acceptable than the other pricing practices. The place is also an essential category in marketing. Respondents decided that it can be stated from the data that the highest rank on where to sell the pili pasta is in coffee shops or café. And from the data of the category people in marketing the pili pasta, it can be noticed that the highest percent of the respondents perceived that local tourists are the ones to pili pasta should be selling it to.

Upon analyzing the demographic profile of the respondents, the researcher's perceived that in every respondent has its own specific perspectives when it comes to the Marketability of the pili pasta. The respondents also have various suggestions on how to market the product, and it varies on age, occupation, and years in the business.

Along with the significance of Agreement among the Ranks of the Marketability and acceptability of Pili Pasta, to find out whether there exists a significant Agreement on the ranking of the Acceptability of Pili Pasta, the Kendall Coefficient of Concordance W and Chi-square were computed. The level of Acceptability, the summation of the squared deviation from the mean, computed W, computed X^2 or chi-square, degree of freedom, the significance of the agreement, and the decision on alternative hypothesis was computed. As reflected on the data, the summation of the squared deviation ranged for Taste, 2, Texture, 5, Appearance, and Aroma, 10.5. Following the same order, the coefficient of concordance W was 0.85, 0.16, 0.19, and 0.34.

The X^2 were computed to determine the significance of an Agreement on the level of Acceptability of Pili Pasta in the 2nd District of Albay. The computed X^2 for Texture was 1.28 ($p>0.05$), Appearance, 1.52, ($p>0.05$) and 2.72 for Aroma ($p>0.05$), and 6.5 for Taste, ($p<0.05$).

From the data presented, it implies that the four groups of respondents significantly agreed on the Acceptability of Pili pasta when it comes to taste. With its taste, it is an assurance that the product will be accepted based on the Agreement of the respondents.

The data also revealed that the respondents do not significantly agree on the Marketability of the pili pasta. Hence these respondents have their identity

judgment about how the product will be marketed depending on the demographic area of the market.

CONCLUSION

The introduction of the Pili Pasta in the Bicol Region, Philippines, was highly acceptable that it can be in line with other pasta found in the market. Though however, there can be challenges that can be encountered, doable for as long as the sustainability of its supply can be addressed. The pili pasta will serve as a signature product of the Bicol Region since pili nuts are considered a product of the region.

TRANSLATIONAL RESEARCH

The Bicol Region, as a potential supply of pili nuts, must support the product innovation to become competitive and also to be known as a supplier of Pili pasta, just like sili ice cream. This can be considered as food tourism that will bring forth new tourist arrival since the product being new to the market if supported. Likewise, this innovation study must be published in a journal, newsletter, and article for reference for other researchers who intends to innovate a product.

LITERATURE CITED

Arifin, F. A. S., Syah, T. Y. R., Indradewa, R., & Pusaka, S. (2019). Sales and Marketing Strategies Duck Nugget Product Using Porter's Five Force and SWOT Analysis. *Journal of Multidisciplinary Academic*, *3*(4), 71-75. Retrieved from http://www.kemalapublisher.com/index.php/JoMA/article/view/393

Bech-Larsen, T., Lähteenmäki, L., Grunert, K., Ueland, Ø., & Åström, A., Arvola, A., (2002). Acceptability of genetically modified cheese presented as real product alternative. *Food quality and preference*, *13*(7-8), 523-533. Retrieved from https://doi.org/10.1016/S0950-3293(01)00077-5

Coronel, R. E. (1996). *Pili nut, Canarium ovatum Engl* (Vol. 6). Bioversity International. Retrieved from https://bit.ly/34YwrrI

Galanakis, C. M. (Ed.). (2016). *Innovation strategies in the food industry: Tools for implementation*. Academic Press. Retrieved from https://bit.ly/2QM3JSB

Gimenez, M. A., Gámbaro, A., Miraballes, M., Roascio, A., Amarillo, M., Sammán, N., & Lobo, M. (2015). Sensory evaluation and acceptability of gluten-free Andean corn spaghetti. *Journal of the Science of Food and Agriculture*, *95*(1), 186-192. Retrieved from https://doi.org/10.1002/jsfa.6704

Idris, I., & Sari, R. A. (2012). SWOT Analysis as Strategy to Improve Competitiveness of Durian Pancake Medium Enterprises. Retrieved from https://doi.org/10.31219/osf.io/4zh7k

Imram, N. (1999). The role of visual cues in consumer perception and acceptance of a food product. *Nutrition & Food Science*. Retrieved from https://doi.org/10.1108/00346659910277650

Jessup, A. Golan, E., Kuchler, F., & Mitchell, L., Greene, C., (2001). Economics of food labeling. *Journal of consumer policy*, *24*(2), 117-184. Retrieved from https://doi.org/10.1023/A:1012272504846

Jolliffe, L. (2019). Cooking with locals: A food tourism trend in Asia?. In *Food tourism in Asia* (pp. 59-70). Springer, Singapore. Retrieved from https://doi.org/10.1007/978-981-13-3624-9_5

Kaur, G., Sharma, S., Nagi, H. P. S., & Dar, B. N. (2012). Functional properties of pasta enriched with variable cereal brans. *Journal of food science and technology*, *49*(4), 467-474. Retrieved from https://doi.org/10.1007/s13197-011-0294-3

Kuczmarski, T. D. (1996). Fostering an innovation mindset. *Journal of consumer marketing*. Retrieved from https://doi.org/10.1108/07363769610152563

Li, Y. O., Makhlouf, S., Jones, S., Ye, S. H., Sancho-Madriz, M., & Burns-Whitmore, B., (2019). Effect of selected dietary fibre sources and addition levels on physical and cooking quality attributes of fibre-enhanced pasta. *Food Quality and Safety*, *3*(2), 117-127. Retrieved from https://doi.org/10.1093/fqsafe/fyz010

Ma, He (2013) Research on the Risk Factors Affecting Food Traceability in the Food Supply Chain, HBO Upgrade Theses Management Studies, Wageningen

Montevirgen, L. S., Marcone, M. R., Kakuda, Y., Jahaniaval, F., & Yada, R. Y., (2002). Characterization of the proteins of Pili nut (Canarium ovatum, Engl.). *Plant Foods for Human Nutrition*, *57*(2), 107-120. Retrieved from https://doi.org/10.1023/A:1015266423254

Mckeown, M. (2014). *The innovation book: how to manage ideas and execution for outstanding results*. Pearson UK. Retrieved from https://bit.ly/3gPSaoe

Millena, C. G., & Sagum, R. S. (2018). Physicochemical characterization and fatty acid profiling of different Philippine pili nut (Canarium ovatum, Engl.) varieties. *Journal of the American Oil Chemists' Society*, *95*(3), 325-336. Retrieved from https://doi.org/10.1002/aocs.12028

Munuera-Aleman, J. L., Carbonell-Foulquié, P., & Rodrıguez-Escudero, A. I. (2004). Criteria employed for go/no-go decisions when developing successful highly innovative products. *Industrial Marketing Management*, *33*(4), 307-316. Retrieved from https://doi.org/10.1016/S0019-8501(03)00080-4

Ong, R. M. G., Barcelon, E. G., Chua, J. N., Encinas, J. B., Montemayor, J. E., & Nagalinngam, M. G., Ocampo, A. E., (2014). Online consumer preference and sensory acceptability of vegetable-added pasta noodles. *Food and Public Health*, *4*(6), 301-305. Retrieved from https://www.cabdirect.org/cabdirect/abstract/20153053806

Othmer, K., (2007). Kirk-Othmer Encyclopedia of Chemical Technology, Index to Volumes 1-26, 5th Edition. Retrieved from https://bit.ly/34QyFtg

Prabhasankar, P. & Fuad, T., (2010). Role of ingredients in pasta product quality: A review on recent developments. *Critical reviews in food science and nutrition*, *50*(8), 787-798. Retrieved from https://doi.org/10.1080/10408390903001693

Prahalad, C. K. (2012). Bottom of the Pyramid as a Source of Breakthrough Innovations. *Journal of product innovation management*, *29*(1), 6-12. Retrieved from https://doi.org/10.1111/j.1540-5885.2011.00874.x

Sanni, S. A., Bamgbose, C. A., Babajide, J. M., & Sanni, L. O. (2007). Production of instant cassava noodles. In *Proceedings of the 13th Triennial Symposium of the International Society for Tropical Root Crops (ISTRC): Opportunities for Poverty Alleviation and Sustainable Livelihoods in Developing Countries* (pp. 466-472). Retrieved from https://bit.ly/2QIV4Av

Schaafsma, G., & Kok, F. J. (2005). *Nutritional aspects of food innovations: a focus on functional foods* (pp. 207-220). Wageningen Academic Publishers, Wageningen, The Netherlands. Retrieved from https://bit.ly/3gQWdQQ

Vetri, M. (2015). Mastering Pasta. Retrieved from https://www.youtube.com/watch?v=WOpGb0ZKVSM

Wang, Y., Zhang, M., & Mujumdar, A. S. (2012). Influence of green banana flour substitution for cassava starch on the nutrition, color, texture and sensory quality in two types of snacks. *LWT-Food Science and Technology*, *47*(1), 175-182. Retrieved from https://doi.org/10.1016/j.lwt.2011.12.011