Journal of Physics:
Conference Series

PURPOSE-LED PUBLISHING™

PAPER • **OPEN ACCESS**

Technopreneurship and Ecopreneurship on Yellow Pumpkin (*Cucurbita maxima*) to Produce An Industrial Based Product of Delicious Josua Pizza with A High Economic Value

To cite this article: Jokebet Saludung *et al* 2019 *J. Phys.: Conf. Ser.* **1244** 012047

View the article online for updates and enhancements.

You may also like

- Fatty acid composition of seeds of pumpkin (Cucurbita) varieties cultivated mechanized in the conditions of the Nonchernozem zone of the Russian Federation
A V Goncharov, Sh V Gasparyan, A G Levshin et al.
- Preparation of Emulsions of some Vegetable Oils and Evaluation of Their Effectiveness in Inhibiting Pathogenic Fungus *Didymella bryoniae*
Abdullah Abdulkareem Hassan and Maryam Sarhan Mazion
- Effect of low BAP Levels on Multiple Shoots Induction in Indigenous Nigerian Pumpkin (*Cucurbita pepo* Linn.)
Oluwadurotimi Samuel Aworunse, Regina Voke Omasoro, Bukola Soneye et al.

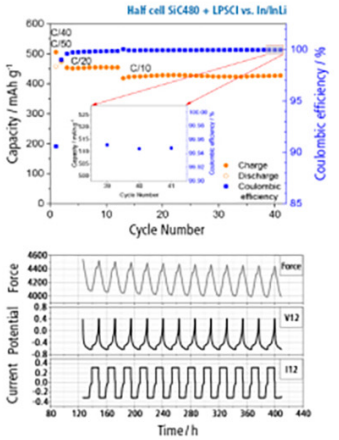
The New PAT-Cell-Solid!

EL-CELL® electrochemical test equipment

Cycle Solid-State Batteries Under Controlled Pressure of up to 300 MPa (6 mm Diameter)!



- Adjust and measure a force of up to 9000 N on the cell stack!
  Force adjustment possible throughout the entire experiment
- Built-in force, and temperature sensors!
  With optional gas pressure sensor and gas in- and outlet
- PAT-Solid-Core for easy assembly and reproducible results!
  Press and cycle solid-state batteries with 6 or 10 mm electrode diameter
- Cableless and highly sealed battery test cell!
  For precise long-term measurements of solid-state cell chemistries



Learn more on our product website: Scan me!

Download the data sheet (PDF): Scan me!

Or contact us directly:
+49 40 79012-734
sales@el-cell.com
www.el-cell.com

This content was downloaded from IP address 87.49.42.83 on 03/10/2026 at 02:52

IOP Conf. Series: Journal of Physics: Conf. Series **1244** (2019) 012047 doi:10.1088/1742-6596/1244/1/012047

Technopreneurship and Ecopreneurship on Yellow Pumpkin (*Cucurbita maxima*) to Produce An Industrial Based Product of Delicious Josua Pizza with a High Economic Value

Jokebet Saludung*
Fakultas Teknik Universitas Negeri Makassar, Jalan Dg. Tata Raya, Makassar, Indonesia

Sundari Hamid
Program Diploma Universitas Bosowa Makassar, Indonesia

Amelda Paramezwary
UPH Global Campus,Gedung D Lantai 3 Ruang 314, Karawaci Tangerang- Banten 15811, Indonesia

*Corresponding author: jokebet@yahoo.com

Abstract. This research is a research and development that aims to develop technopreneurship and ecopreneurship of yellow pumpkin (cucurbita maxima) based on factory product. Yellow pumpkin (cucurbita maxima) very abundant on the season in Makassar, the price is very low and thrown away into the trash that damage ecosystems because usefull unknown by the public. The public only know to use with traditional for vegetable and decoction. Therefore need to developing with technopreneurship and ecopreneurship based on factory product through research to be made high valuable economic product. The results of research have to socialized to be productive and improve people's lives. Experimental research was conducted in laboratory will be developed in the field to application on the second research in 2019. Beginning from the first research (2018) to product models prototype of yellow pumpkin (cucurbita maxima) are delicious pizza brand Josua. Using organoleptic test with indicator are color, flavor, exture, aroma, to test of hedonic and hedonic quality. Using checklist instrument with 25 trained panelist. Datum were analyzed by descriptive with SPSS Program. The result of product is qualified and can be marketed with a high price and high valuable economic product based on factory product.

Keywords: Technopreneurship, Ecopreneurship, Yellow Pumpkin, Delicious Pizza, Factory Product, High Valuable Economic

1. Introduction

Pumpkin with lathin language *Cucurbita moschata* is a plant belonging to the *Cucurbitaceae* family. Starting from the leaves, easy stems, flowers, fruit and seeds can be used as vegetables, snacks and substitutes for staple foods after steaming or frying and boiling. Both traditionally processed and developed with new innovations. Can be made various products such as compote, porridge, stew, pastries, cake, dodol, and others. This research specifically made the development innovation into Savory Pizza with the brand Josua (Jokebet, Sundari, Amenda). The pumpkin fruit has essential nutritional components [1]. The nutritional content of pumpkin can be used as an alternative food substitute for rice so that if optimized can overcome the food crisis. Traditionally, Pumpkin can be used for an anti-diabetic, anti-hypertensive, anti-tumor, immunomodulating, anti-bacterial because they

Content from this work may be used under the terms of the Creative Commons Attribution 3.0 licence. Any further distribution of this work must maintain attribution to the author(s) and the title of the work, journal citation and DOI.
Published under licence by IOP Publishing Ltd

contain bioactive compounds such as phenolics, flavonoids, vitamins (including vitamins β-carotene, vitamin A, vitamin B2, α-tocopherol, vitamin C, and vitamin E) [2] Minerals (iron, calcium, magnesium, phosphorus, manganese, and zinc), protein, fat, thiamine, riboflavin, niacin, pantothenic acid. Type of yellow pumpkin is very much presented on the internet but the one chosen to make pizza is the type of yellow pumpkin as in the following picture:



Figure 1. Stems, Leaves, Flowers, Pumpkin Fruit selected to make Gourd Kuning Pumpkin Pizza, Josua [3]

This type of yellow pumpkin is widely found in Makassar and elsewhere. All areas in Makassar can produce pumpkin because it is easy to grow without difficult maintenance. When the fruiting season is very abundant, the selling price is very low in traditional markets. Benefits of Yellow Pumpkin for Health are: 1. Helps Lower Cholesterol Levels, 2. Helps Diabetics, 3. Prevents Cancer, 4. Helps Maintain Heart Health, 5. Maintain Eye Health, 6. Reduce stress, 7. Prevent constipation (rich in fiber), 8. Helps maintain prostate health and prevents prostate enlargement, 9. Helps prevent kidney stones and various diseases of bile content, prevents irritation of stomach acid, 10. Helps strengthen bones and tooth enamel, 11. Prevents osteoporosis (zinc and magnesium). 12. Prevent arthritis (anti-inflammatory agent), 13. Lower blood pressure [4]. Therefore, the use of yellow pumpkin must be socialized through research so that people know the benefits and want to consume and cultivate better so that their products can have high economic value while improving the ecosystem to be more productive. The use of yellow pumpkin in Makassar is limited to traditional processing by boiling, rejecting, made pumpkin porridge, vegetable pumpkin, only a small part of the campus community that processes it into pumpkin cake, yellow pumpkin dage (Reski Suryanti), kacippi (Masullang), and pumpkin dodol. One of the products produced is yellow pumpkin pizza. Yellow pumpkin pizza has been researched since 2017-2018 to get prototype product models that are favored by panelists and consumers as well as marketable prices. The author has tried to research the development of technopreneurship and ecopreneurship based factory into poding products, finished palit, sheet selei, and yellow pumpkin savory pizza with Josua branded which is the focus of this article. With technopreneurship and ecopreneurship, factory-based on, it can be made a product that tastes of high economic value with the brand Josua (Jokebet, Sundari, Amelda). Josua Brand Delicious Pizza from yellow pumpkin is one of the products of the development and application of various models of food and cake based on local and ecopreneuship [5] which are given a technological touch. Technopreneurship is a jargon that stands for the merging of technology with entrepreneurial skills. Selvarani stated that, technopreneurship is a simple entrepreneurship in a technology intensive context. It is a process of merging technology processes and entrepreneurial talent and skills (Technology + Entrepreneurship = Technopreneurship). A person who undertakes some risk that has the chance of profit. Technopreneurship as a Firm Strategy: links to innovation, creation and performance. [6]. Syed Khurram et.al. suggested that, sustainable growth of firms is highly related to the technopreneurship development robustness in a region. Where is the importance of innovative capability in a technology based firm has been considered inevitable, successful management of innovative capabilities for long-term business success has evolved vividly in the recent years [7]. Okorie et.al. stated that, technopreneurship as a way of societal development, thus establishing the interrelationship between the scientist, engineers and the business sector with the aim of enhancing proficiency in research and development. The critical need for underdeveloped and developing nations to realize and urgently begin to promote and appropriate technopreneurship as a way of life among its citizens [8]. The concept of ecopreneurship is often equated with green entrepreneurship, environmental entrepreneurship, and technopreneurship with technological ecopreneurship. There are various reasons why this is so. There is a growing emphasis on environmental sustainability, which gains momentum in the business environment.

The ecopreneurs identify environmental innovations and their market opportunities for new products or services. [9] On the other hand, the term technological ecopreneurship embodies ecological or green entrepreneurship and technological entrepreneurship, as in Figure 4. Recording to David Kainrath,

ecopreneurship is an emerging concept, and it may become a way of doing business in more environmentally friendly ways. [10]. Ecopreneurship, related to three concepts, namely (1) eco-innovation, (2) eco-commitment, (3) eco-opportunity. Eco-Innovation, Eco-Opportunities, and Eco-Commitment (See Figure 5). Eco-innovation is an action that contributes to the reduction of environmental burden, eco-opportunities are the ability to exploit or exploit market failures due to environmental aspects, and eco-commitment is the willingness to work hard and provide energy and time for work or activities that are environmentally friendly. The ecopreneurship model that Abrahamsson has put forward, the interset relates to three things, namely eco-innovation, eco-opportunity, eco-commitment (Figure 5). [11].

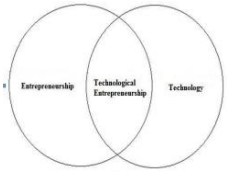


Figure 2. Technological Entrepreneurship

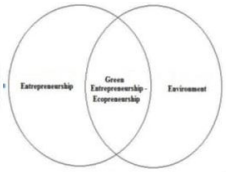


Figure 3. Ecopreneurship

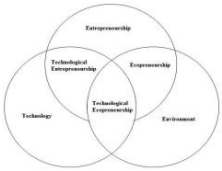


Figure 4. Technological Ecopreneurship

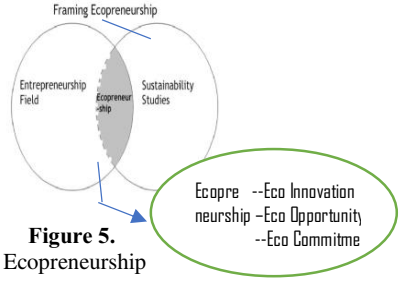


Figure 5. Ecopreneurship

According to Permadi, there are four Ecopreneur principles in running their products, namely reduse, reuse, recycle, and upcycle. Upcycle, providing new benefits is better for products that are no longer used [12]. Ecopreneurship is a concept of management and production that is always strived to be environmentally friendly. Environmental conservation by processing abundant food ingredients in the season that is often wasted into waste is processed into high-economic value products that are efficient through a touch of tactnopreneurship to save the environment so that it has sustainable benefits with higher economic value. This research has revealed a new segment of entrepreneurship, namely technological ecopreneurship, which includes future ideas and businesses. In all fields, the latest technology is required, even for the purpose of protecting, preserving and improving the environment. Given this, innovations from the technological domain can be used on top mentioned purposes. The conceptual model (Piech & Radosevic) [13] has been developed and used in this study by making adjustments according to the needs of experimental research. According to Rahmat Kurniawan, the teaching factory is a development of a dual system production unit and education that has been carried out in vocational schools, one form of development from vocational schools to models of production schools as a place for student learning. In the business or production unit, students immediately practice by producing goods or services that can be sold to consumers [14]. Teaching factory is a learning activity where students directly conduct production activities in the form of goods or services within the school education environment. The goods or services produced have quality so that they are worth selling and accepted by the public or consumers [15] and the purpose of the teaching factory is to produce graduates who are professionals in their fields, develop curricula that focus on modern concepts, demonstrate the right solutions to the challenges facing the industrial world, as well as the transfer of technology from industries that are partners with students and educational institutions [16]. According to Jorgensen, et al. teaching factory aims to provide real experience in design, manufacturing, and product realization designed to develop a curriculum that has a balance between knowledge of theory and technology, design, business activities, and professional skills [17] to improve competence and entrepreneurial spirit in students and students. According to Rahmat Kurniawan, the learning model that is suitable to be applied is the six-step Teaching Factory Model or TF-6M [14]. TF-6M model, one work cycle consists of six steps, namely: receiving orders, analyzing orders, stating readiness to work orders, working on orders, conducting quality control, and submitting orders. The implementation of the TF-6M model can support efforts to improve innovative and creative human resources in the era of globalization through entrepreneurial education. The TF-6M model consists of two groups of soft skills and hard skills activities that aim to improve the productive competence and competency of the students involved. This is what will be followed up in the PDUPT research.

2. Research Method

This type of research is a type of Research and Development research (R & D) which aims to develop products from pumpkin with a touch of environment and factory-based technology. In the initial stage, researchers developed a prototype model of pizza products from pumpkin fruit from flour and pumpkin puree through experimental experiments to obtain prototypes of locally based product models and ecopreneurship. Using a Joke Model with seven components, namely: initial findings, development design, realization and model / prototype formations, tests, validation and revision, implementation and implementation of models, evaluation (results), product dissemination. [18]. This research is a type of quasi-experimental research by choosing one shot case (XO) [20].

Materials used: Mature yellow pumpkin is made into a yellow pumpkin savory pizza according to the test recipe. Pizza manufactured is engineered from three experimental tests with different ingredients.

Research design: Experiment trials have been carried out three times involving five students and have produced the prototype product model called the prototype product model that best suits the standards of factory-based products so that it is more marketable and favored by panelists and consumers.

The unit of analysis: there are three kinds of pizza products from three different experimental trials but the ones presented in this article are the final results analyzed.

Research Procedure: Starting from the presurvey for preliminary findings on materials, theoretical and prescription studies, model development designs, realization and model building / product model prototypes carried out three times in the laboratory. The study population was pumpkin fruit in Makassar. Research material samples were taken incidentally purchased at the traditional Pa'baeng-baeng market. The number is six large pumpkin. The research was carried out in the PKK laboratory.

Data collection techniques used were 25 organoleptic tests by trained panelists. Using data source triangulation techniques, namely instrument checklist, observation, interview, document analysis, focus group discussion, study the development of a model of pumpkin savory pizza. Organoleptic tests are used for hedonic tests and hedonic quality tests. This method has been used by Jokebet in previous research. Organoleptic tests have collected data on laboratory results and field test results by Panelists with observation, interviews, FGDs, and questionnaires. [19].

Data analysis technique. Data is processed and analyzed using descriptive analysis (Sugiono) with the help of SPSS program. [20]. Qualitative data were analyzed qualitatively. The research team was fully involved in all experimental activities. Indicators of achievement are prototypes of pumpkin product models based on technopreneurship, ecopreneurship, and factory. The prototype of the product model is a pumpkin pumpkin pizza that tastes savory, sweet, according to the quality of industrial production, local ingredients and ecosystems. The aim is to produce local and environmental-based product models that will be used as teaching materials for entrepreneurship training for PKK students.

Organoleptic Test: Pumpkin which was examined in the laboratory, the data was collected by organoleptic tests by 25 trained panelists to get the best product model that was most preferred and feasible to be developed according to industry needs. This method has been done using triangulation data collection techniques and works well. Laboratory data collection by organoleptic test by trained panelists. Organoleptic testing is a test based on the sensing process. Organoleptic testing is a method of testing using human senses as the main tool for measuring the acceptance of the product and its quality. The senses used judge a product related to color, texture, taste, aroma. There are four main criteria in the assessment, namely taste, color, texture and aroma. The four are assessed for hedonic and hedonic quality tests. [21]. Stone explained that organoleptic testing is the testing of food products based on the level of preference and willingness to use a product. Organoleptic testing, sensory testing or sensory testing is a way of testing using the human senses as the main tool for measuring the acceptance of the product. Organoleptic testing can give an indication of decay, deterioration of quality, damage to products called hedonic quality assessments. [22]. In organoleptic testing, panelists are needed to make an assessment. There are 7 kinds of panels that are usually chosen to be used, namely (1) Individual experts, (2) Small expert panels, (3) trained panels, (4) Untrained panels, (5) Panels rather trained, (6) Consumer panel, (7) Children's panel [23]. This study uses 25 trained panelists.

3. Result and Discussion

The results of the prototype development of pumpkin product models based on factory products and ecopreneurship that were given a technological touch have produced savory pumpkin pizza and is given the Josua brand. The experimental research process was carried out three times, namely 1) limited test, second test, and third test. Limited testing (1) using 100% pumpkin flour and pumpkin flour with 1: 1 pumpkin puree without flour and smooth bread. The second test (2) the bread is smooth with 300 grams of pumpkin flour and the bread is smooth with 300 grams of pumpkin puree. The third test (3) uses smooth bread with 200 grams of pumpkin puree and 300 grams of smooth bread (3). The toping varies. Limited test in 2017 with 100% pumpkin flour (PNBP). In 2018 (PDUPT) a limited test was repeated with 100% pumpkin without flour in a different way, the second test with 300 grams of pumpkin flour and 300 grams of pumpkin puree (2), and the third test (3) pumpkin puree 200 grams, and 300 grams + 100 grams of pumpkin flour (B and C) with different topings. Second and third trials were added to the doughy bread dough. Crispy bread dough consists of flour 500 grams, fermipan 1 tablespoon, bred infroverd teh teaspoon, TBM ½ tablespoon, milk 1 tablespoon, butter 50 grams, sugar 125 grams, eggs 1 grain, salt ½ teaspoon, water 250 cc . All diadon ingredients become one until smooth and then added pumpkin puree with a certain ratio of diadon until the mixture is smooth. Flatten the pizza, give toppings, then burn the oven until cooked. Lift, cool for a while, cut and serve or pack and market. The results are as follows:



2017 2018 (1) A B (2) A B (3) A B C

Figure 6. The product of tasty yellow pumkin Pizza (documentation of research result, 2017-2018)

The experimental results were tested by oleptic organs for hedonic tests and their hedonic quality tests using the 1-5 rating scale. Datum were analyzed descriptively with the help of SPSS program for data Frequency and Percentage, Mean, Median, Mode. The difference in acceptability or level of preference for the product and the difference quality of yellow pumpkin pizza product were analyzed by means of the Mean difference test.

Description: Organoleptic test for hedonic assessment and hedonic quality with scale 1-5. Hedonic Assessment Rubric: 1 = Very Unlike, 2 = Don't Likes, 3 = Somewhat Likes, 4 = Likes, 5 = Very Likes. Hedonic Quality Assessment Rubric: 1=Very Not Good,2 = Not Good, 3 = Somewhat Good, 4 = Good, 5 =Very Good. Summary of the organoleptic test results by trained panelists for hedonic and hedonic quality can be seen in the tables 1, 2, 3, 4, 5, and 6 as follows:

Table 1. Summary of Hedonic Asessement Result of 1st Experimental Research

Product Model	Aroma					Color					Texture					Flavor				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
1. Pizza from flour 100% pumpkin / f	10	12	3				4	15	6		15	9	1			8	17	0	0	0
%	40	44	12				16	60	24		60		4			32	68			
2. Pizza of flourpumpkin + puree pumpkin 1: 1/ f		15	10	0	0		10	13	2	0	12	10	3			5	18	2	0	0
%		60	40				40	52	8		48	40	12			20	72	8		

Source: Result of Analysis of Organoleptic Test Data From Panelists (2018)

Table 2. Summary of Hedonic Asessement Result of 2nd Experimental Research

Product Model	Aroma					Color					Texture					Flavor				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
1.Pizza from flour pumpkin + sweetbread 1: 1 / f		8	12	5			2	5	12		2	9	12	2			5	15	5	0
%		32	48	20			8	20	48		8	36	48	8			20	60	20	
2. Pizza from puree pumpkin + sweet read 1:1/ f		4	16	5	0		0	8	17	0		7	12	6			4	16	5	0
%		16	64	20				32	68			28	48	24			16	64	20	

Source: Result of Analysis of Organoleptic Test Data From Panelists (2018)

Table 3. Summary of Hedonic Asessement Result of 3rd Experimental Research

Product Model	Aroma	Color	Texture	Flavor

	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
1.Pizza of pumpkin puree 200gr+smooth bread / f			7	15	3			6	20	5			4	17	4			2	18	5
%			28	60	12			24	80	20			16	68	16			8	72	20
2.Pizzapumpkin puree 300g + 100gF+Sbread/ f				11	14				10	15				11	14				10	15
%				44	56				40	60				44	56				40	60
3.Pizza pumpkin puree 300g +100gF+Sbread+To/f.				10	15				9	16				11	14				8	17
%				40	60				36	64				44	56				32	68

Source: Result of Analysis of Organoleptic Test Data From Panelists (2018)

Table 4. Summary of Hedonic Quality Asessement Result of 1 st Experimental Research

Product Model	Aroma					Color					Texture					Flavor				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
1. Pizza from flour 100% pumpkin /f		15	10	0	0		10	15			16	9					19	6	0	0
%		60	40				40	60			64	36					76	24		
2. Pizza of flourpumpkin + puree pumpkin 1: 1/f		13	12	0	0		10	15		0	13	12	0				18	7	0	0
%		52	48				40	60			52	48	0				72	28		

Source: Result of Analysis of Organoleptic Test Data From Panelists (2018)

Table 5. Summary of Hedonic Quality Asessement Result of 2nd Experimental Research

Product Model	Aroma					Color					Texture					Flavor				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
1Pizza from flour pumpkin + sweetbread 1: 1 / f		8	13	4				10	15			10	15				9	12	4	0
%		32	52	16				40	60			40	60				36	48	16	
2.Pizza from pureepumpkin + sweet read 1: 1 / f		4	16	5	0		0	7	18	0		5	14	6			4	14	7	0
%		16	64	20				28	72			20	56	24			16	56	28	

Source: Result of Analysis of Organoleptic Test Data From Panelists (2018)

Table 6. Summary of Hedonic Quality Asessement Result of 3rd Experimental Research

Product Model	Aroma					Color					Texture					Flavor				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
1. Pizza of pumpkin puree 200 gr+smooth bread/ f	0	0	15	10	0	0	0	6	17	2	0	0	8	17	0	0	0	4	16	5
%	0	0	60	40	0	0	0	24	68	8	0	0	32	68		0	0	16	64	20
2 Pizza pumpkin puree 300g+100gF+Sbread/f	0	0	0	11	14	0	0	0	10	15	0	0	0	10	15	0	0	0	11	14
%	0	0	0	44	56	0	0	0	40	60	0	0	0	40	60	0	0	0	44	56
3.Pizza pumpkin puree 300g+100gF+Sbread+To/f	0	0	0	10	15	0	0	0	9	16	0	0	0	10	15	0	0	0	9	16
%	0	0	0	40	60	0	0	0	36	64	0	0	0	40	60	0	0	0	36	64

Source: Result of Analysis of Organoleptic Test Data From Panelists (2018)

Table 7. Summary of Mean Results of Hedonic Test Analysis (Table 1-3) and Hedonic Quality Test (Table 4-6)

Product Model	Aroma			Color			Texture			Flavor		
	A	B	C	A	B	C	A	B	C	A	B	C
Table 1	1,72	2,4	-	3,08	3	-	1,44	1,64	-	2,4	1,88	-
Table 2	2,88	3,04		2,68	3,48		2,48	2,96	-	3,0	3,04	-
Table 3	3,84	4,56	4,60	4,92	4,60	4,64	4.00	4,56	4,56	4,12	4,60	4,68
Table 4	2,4	2,48	-	2,0	2,0	-	1,6	1,88	-	2,24	2,28	-
Table 5	2,84	3,04	-	3,6	3,72	-	2,6	3,04	-	2,8	3,12	-
Table 6	3,4	4,56	4,60	3,44	4,60	4,64	3,68	4,60	4,60	4,04	4,56	4,64

4. Discussion

The results of experimental research based on the results of data analysis can be explained that the acceptance of panelists and consumers on the aroma, color, texture, flavor, are as follows:

4.1. Aroma

In terms of the aroma of pizza using 100 quality pumpkin flour is not good and the aroma is not preferred. The average value is very low because it is considered to be of poor quality. The most preferred aroma is a pizza that uses 300 grams of pumpkin puree + 100 grams of pumpkin flour which is mixed with a sliced and topped variety. The more varied the topping, the more the panelists and

consumers prefer. The mean value is far above the average value (4.60). The highest frequency of very likes.

4.2. Color

When viewed in terms of color, the quality of limited experimental results is still not good and also disliked by researchers and consumers. The color is faded and monotonous. After being given a variety of toppings, the color is better and the quality is preferred. The most preferred color is the result of the third study, namely pizza that uses 300 grams of pumpkin puree + 100 grams of diadon pumpkin flour with a dough of bread mixed with various topings. The color of the pumpkin pizza is strongly influenced by variations of toppings added to the pizza. The highest average value than the others (4.64).

4.3. Texture

In terms of texture the results of the first research on the limited test of the texture is hard and not blooming so that it is not favored by panelists and consumers. From the experimental results, the most preferred texture is the third experimental result, namely pizza that uses 300 grams of pumpkin puree + 100 grams of squeezed pumpkin flour with varied topped smooth bread because of its soft texture, excellent blossoming, the same quality as industrial quality pizza. The average value exceeds the others (4,56).

4.4. Flavor

Taste greatly determines the quality of a product. From the results of experimental products that have been produced, the first trial product is from 100% pumpkin, the taste is not liked and the quality is considered the least good because it tastes tasteless, tasteless, unpleasant, and does not meet the industry standard. The second trial product is already preferred but still hard, the taste is also good. But the products most favored by panelists and consumers are the results of the third trial, 300 grams of pumpkin puree pizza + 100 grams of squeezed pumpkin flour with varied toppings because the texture is very soft, the blossom is very good, the quality is very good, the taste is very good and it's the same as the quality pizza industry. The highest average taste value (4.68). The frequency and percentage of voters felt the most delicious among the others.

The conclusion that the results of the study most favored by both aroma, color, texture, flavor and the best assessed quality are the results of the third trial, namely pizza that uses 300 grams of pumpkin puree + 100 grams of pumpkin flour with a doughy bread dough that has a variety of toppings. the texture is very soft, the blossom is very good, the quality is very good and it's the same as the quality pizza industry, aroma, color is very good and tastes very good. This product will be further developed.

5. Conclusion

From the results of a survey in the community, yellow pumpkin is found in all regions in Indonesia and is widely grown in Makassar. The benefits are very large and the nutritional content is high but is often abundant in seasons but has not been used properly due to ignorance of the community to process it into productive materials with high economic value. That is why the author chose to make pizza from yellow pumpkin to be studied and the results were socialized to the community while giving motivation to use it. Yellow pumpkin pizza can be served at any time either as a snack or as a substitute for staple food. The author has tested the prototype product model and succeeded very well and will be used as teaching materials for entrepreneurship lectures in the PKK and teaching materials for community empowerment training for home industries. Students are involved to become developers, reformers, and innovation agents for the community to utilize local food in their environment as a productive source of income, to create new jobs and improve people's lives. The results that have been achieved are the products prototype model of yellow pumpkin pizza, delicious taste of Josua Brand from yellow pumpkin has been given a factory-based technology so that its have high economic value, are innovative, can be cultivated and are very popular with panelists and consumers, factory-based on and ecopreneurship. Pizza is very popular everywhere. If the Josua branded yellow pumpkin savory pizza is well produced, people can have new jobs and productive that sources are based on environmentally, cheap, easy to obtain, can be processed into popular industry standard products, have high economic value and are very popular with the public.

References

[1] Fokou, E., M. Achu, and M. Tchouanguep. (2004). Preliminary nutritional evaluation of five species of Egusi seeds in Cameroon. Afr. J. Food Agric. Nutr. Develop. (AJFAND). 4 (1):1-11.
[2] Noelia Jacobo-Valenzuela.et.al. (2011). Chemical and Physicochemical Characterization of Winter Squash (Cucurbita moschata D).Article (PDF Available) in Notulae Botanicae Horti Agrobotanici Cluj-Napoca:34-40
[3] Sudarto, Y. 2000. Budidaya Waluh. Yogyakarta: Kanisius.
[4] Purba, J.H. (2008). Pemnafaatan Labu Kuning Sebagai Bahan Baku Minuman Kaya Serat. Skripsi. IPB. Bogor.
[5] Jokebet S. (2018).Model Development of Food Types Various and Cakes Based on Local and Ecopreneurship. 2nd International Conference on Statistics, Mathematics, Teaching, and Research, *IOP Publishing. IOP: Journal of Physics*: Conf. Series 1028 (2018) 012175 doi :10.1088/1742- 6596/1028/1/012175
[6] Selvarani A, and Kanagaraj V. (2015). A Studyof Technopreneurship in Small and Medium Industry. Technopreneurship as a Firm Strategy: links to innovation, creation and performance, International Journal of Management (IJM), ISSN 0976-6510, Volume 6, Issue 1, January (2015), pp. 385-392
[7] Syed K A J. (2014). Impact of Social Capital and Firms'Innovative Capability on Sustainable Growth of Women Owned Technoprises (SMEs): World Applied Sciences Journal 29 (10): 1282-1290, 2014 ISSN 1818-4952 © IDOSI Publications, 2014 DOI 10.5829/idosi.wasj.2014.29.10.2029
[8] Okorie N.N, Kwa D.Y, Olusunle S.O.O. (2014). Technopreneurship: An urgent need in the material world for sustainability in Nigeria,European Scientific Journal,October 2014,Vol.10, No.30 ISSN 1857-7431
[9] Pastakia, A.(2002). Assessing ecopreneurship in the context of a dev. *Greener Management International*, 93-108.
[10] David K. (2009). Ecopreneurship In Theory And Practice.Proposed Emerging Framework ecopreneurship. *Bachelor thesis*, Umea School of Business
[11] Abrahamsson. (2006). *Sustainopreneurship-Business with a Cause*. Thesis, Växjö University, Sweden.
[12] Permadi, A. Guruh. (2011). *Menyulap Sampah Jadi Rupiah*.Jakarta : MUMTAZ Media.
[13] Piech, K., Radosevic,S. (2006). The Knowledge-Based Economy in Central and East European. Palgrave Macmillan
[14] Rahmat K. (2014). Pengaruh Penerapan Model Pembelajaran *Teaching Factory* 6 Langkah (Tf-6m) dan Prestasi Belajar Kewirausahaan Terhadap Minat Wirausaha. UPI Bandung *INVOTEC,Volume X,No.1,2-2014:57-66*
[15] Moerwishmadhi. (2009). *Teaching factory suatu pendekatan dalam pendidikan vokasi yang memberikan penga- laman pengembangan technopreneurship*. Makalah *Seminar Nasional Learning for Teaching factory* Malang.
[16] Alptekin, et al.(2001). Pengembangan *teaching factory* di *Penn State Univesity, The University of Puerto Rico- Mayagues,of Washington.* Makalah.*American Society for Engineering Education Annual Conference and Exposition.*
[17] Jorgensen, J.E. et al.(1995). The learning factory. *Proceedings of the Fourth World Conferencel,Minneapolis,USA*
[18] Jokebet S. (2014). Joke Models of Development Result and Benefit.*Procidings* ICMSTEA,2014.
[19] Jokebet S. (2017). Development Result of Kecombrang Fruit Become Various Products for Home Industry. *International Journal of Science and Research (IJSR)* ISSN (Online): 2319-7064. vol 6 issue 9, September 2017. Index Copernicus Value (2015): 78.96 | Impact Factor (2015): 6.391.
[20] Sugiono.(2016).*Metode Penelitian Manajemen.Pendekatan Kualitatif dan Kuantitatif.* Alpabeta,Bandung
[21] Soekarto S T. (2008). *Penilaian Organoleptik untuk Industri Pangan*. Page 34.
[22] Stone,H,Rebecca.N. B., Thomas,H.A.(2012).*Sensory Evaluation Practice*.Fourth Edirion Elsevier Inc.USA

[23] Adam, Billy J.(2010). *Seleksi panelis.*http://billyjoeadam.wordpress.com/seleksi-panelis) was accessed April 2012