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Acceptance of Pak Choy Sticks as a Culinary Innovation in the Creative Economy of Ngrombo Baki Sukoharjo Tourism Village

Wahyu Tri Hastiningsih
Politeknik Indonusa Surakarta, Indonesia
Email: wahyutri@poltekindonusa.ac.id

Prasiwi Citra Resmi
Politeknik Indonusa Surakarta, Indonesia
Email: prasiwicitra@poltekindonusa.ac.id

ABSTRACT
Ngrombo Village is a tourist village in Sukoharjo. Ngrombo Tourism Village provides hydroponic education packages, focusing on cultivating pak choy vegetables. However, after the post-harvest process, residents only sell the pak choy as fresh vegetables without further processing. This reduces the potential selling value of pak choy, which could be increased. One option for processing pak choy is to make pak choy sticks. This research aims to determine the materials and methods for making pak choy sticks and the public's acceptance of hybrid pak choy sticks. This quantitative and descriptive research involved conducting a direct survey at locations producing pak choy in Ngrombo Village, Baki, Sukoharjo. The quantitative aspect refers to data analysis using statistics and numbers, while the descriptive aspect involves determining the frequency distribution of respondents' answers through a questionnaire distributed to selected respondents. The data obtained is then processed using statistical analysis to help researchers draw conclusions. The results of this research indicate that the ingredients for making pak choy sticks include pak choy, wheat flour, tapioca flour, corn flour, baking powder, chicken stock powder, garlic, salt, pepper, eggs, and margarine. The method involves mixing the ingredients, kneading, flattening, cutting, and frying. An organoleptic test conducted with 35 panelists revealed that the pak choy sticks had a distinctive aroma, a savory taste, a crunchy texture, a dominant green color, and were generally well-liked by the panelists.

Keywords: Village, tourism, pak choy, economy, creative

INTRODUCTION

Village tourism is a tourism activity that offers an overall atmosphere emphasizing the authenticity of the village, such as natural views, culinary delights, souvenirs, and homestays (Adiwilaga & Millah, 2023) . Village tourism invites tourists or outside residents to visit a village, see, enjoy, and learn about the village's authenticity based on its uniqueness and potential (Yacob et al., 2021) . Tourism villages in rural tourism are assets based on rural potential with unique attractions that can be developed as tourism products to attract visitors (Sudibya, 2018) .

To be called a tourist village, the area must prepare essential and supporting components (Chaerunissa & Yuniningsih, 2020) . Nuryanti states that a tourist village must have adequate accommodation, attractions integrating tourists into community activities, and natural beauty (Halim, 2023) . Third, the natural beauty, uniqueness and rarity of the tourist village itself. Supporting components include potential for tourism, culinary arts, and distinctive culture (Istiyani, 2019) .

Ngrombo Village in Baki District, Sukoharjo Regency is a village known by the people of Surakarta and its surroundings as a tourist village center (tri Hastiningsih et al., 2023) . The key to success in building a tourist village is community empowerment that supports local wisdom. Local communities are directly involved in village development (Mastuti et al., 2021) . So far, Ngrombo Village has been known as a guitar village or guitar industry center in Sukoharjo Regency. But not only that, there are several other potentials in the village. These potentials have been worked on by the Ngrombo Kuncoro tourism awareness group (Pokdarwis) for the last few years. There are 15 locations that people can visit in the tourist village of Ngrombo, Sukoharjo, ranging from parks on the banks of the Bengawan Solo River, village culinary delights, to cultural tourism (Arintoko et al., 2020). Apart from that, the Ngrombo Kuncoro tourist village also provides hydroponic education packages and guitar education packages.

Hydroponics is a growing method without using soil as a binder for the various nutrients needed by plants. The hydroponic plant developed and cultivated in Ngrombo Village is the pak choy vegetable. Pak choy plants (Brassica chinensis L.) or what can also be called meatball mustard greens or spoon mustard greens are plants that are easy to grow and quite economical (Anom, 2016) . Pak choy mustard greens are a type of vegetable that is widely cultivated today because it is easy to plant and manage using the hydroponic method. The stems and leaves of pak choy are wider than ordinary green mustard greens, making the pak choy type of mustard greens more often used by people in various cooking menus (Gofar et al., 2021) . This certainly provides quite bright business prospects for Pak choy mustard greens farmers, because market demand is quite high. Pak choy also has many health benefits if consumed continuously, namely it can relieve itching in the throat in cough sufferers, cure headaches because it contains vitamins and nutrients that are important for human health (LAKSMI et al., 2021) .

Ngrombo Village residents cultivate pak choy well, producing quality products. However, post-harvest, they only sell pak choy as fresh vegetables, reducing its potential selling value. Innovation in processing pak choy into products like pak choy sticks can increase its value and provide additional income for residents. This research aims to determine the materials and process for making pak choy sticks and the public's acceptance of this product. (tri Hastiningsih et al., 2023) . Previously, pak choy vegetables were only used and consumed as fresh vegetables or a mixture of cooking menu ingredients. There is no innovation related to further processing of pak choy, meaning pak choy is sold immediately after the harvest process (Henny & Gobilik, 2022). There is a need to change the post-harvest process and sales distribution of pak choy by providing innovations related to culinary delights made from pak choy vegetables to increase the selling value as well as a source of income for residents. One option for processing pak choy vegetables is to make pak choy sticks. It is hoped that making pak choy sticks can be an alternative for processing pak choy vegetables that can be marketed widely and can become a source of more income for the people in Ngrombo Village (Faqeerzada et al., 2018).

This research aims to determine the materials and process for making pak choy sticks and the public's acceptance of this product. The benefit of this research is to obtain information about the materials and process for making hydroponic pakchoy sticks, as well as to find out the extent to which the public

accepts the existence of this innovative product. Thus, it is hoped that the results of this research can contribute to the development of horticultural products based on hydroponic technology that can be well received by consumers.

RESEARCH METHODS

This research was conducted in Ngrombo Village, Baki District, Sukoharjo, Central Java, Indonesia. The location selection was carried out using a purposive method, namely a research method where the research location was chosen deliberately and based on the consideration that at the research location there were farmers who cultivated pak choy vegetables, and there had been no research regarding innovations in processing pak choy vegetables in Ngrombo Village, Baki District, Sukoharjo. The research that has been carried out is of a quantitative and descriptive type through a direct survey to the research location of pak choy vegetable producers in Ngrombo village, Baki Sukoharjo. Quantitative means that this research uses data analysis with statistics and numbers, while descriptive is to determine the frequency distribution of respondents' answers through a list of questions distributed to respondents who have been selected by the researcher.

Researchers came to the research location to provide innovative ideas related to making Pokchoy Sticks which would be aimed at community members in Ngrombo Village who cultivate pakchoy plants. Researchers explain and socialize the manufacturing process from the preparation stage to the product being ready for sale and consumption. Meanwhile, distributing questions using a questionnaire contains parameters that are focused on producers and consumers of Pokcoy Sticks, where the data obtained can be useful for evaluating the products that have been made. There is also a library research method, namely the researcher collects data from existing literature and references from various journals and books, used as a theoretical basis that supports this research. The data obtained is then processed using statistical analysis to make it easier for researchers to draw conclusions.

RESULTS AND DISCUSSION

1. Materials and manufacturing process for hydroponic pakchoy sticks

   The ingredients used in this pakchoy stick are:

Table 1 Materials for making hydroponic pakchoy sticks

No	Material	Size
1	Pak choy	50 grams
2	Flour wheat	100 grams
3	Flour tapioca	50 grams
4	Flour cornstarch	1 tbsp
5	Baking powder	½ tsp
6	Broth powder chicken taste	1 gram
7	Onion white	1 clove
8	Salt	1gram
9	Pepper powder	Enough
10	Egg	1 item
11	Margarine	25 grams

Source: Researcher 2023

Figure 1. Flow of making hydroponic pakchoy sticks
Source: researcher 2023

2. Public acceptance of hydroponic pakchoy sticks

In this research, for public acceptance using organoleptic tests. The following are the results of data processing.

Organoleptic Test

Table 3. Organoleptic Test Instructions

Test Type	Organoleptic Test
Sample Type	Pak choy Vegetables
Instructions	Give an assessment of the bok choy vegetables provided by ticking the column that is considered appropriate

Source ; Researcher 2023

The organoleptic test was carried out by giving instructions to the panelists by providing samples of pak choy that had been prepared and providing an assessment form according to the parameters that had been determined (Agustina & Hakim, 2023) . There are several parameters taken, namely color, texture, taste, aroma, and the panelists' overall assessment of the pak choy samples provided (Sarika et al., 2020) . The assessment is divided into several value ranges, namely 1-3 for the parameters of color, texture, taste and aroma, while the value range of 1-5 is for the overall parameters of Pak choy vegetables. Information about each parameter assessment can be seen in Table 3.

Table 3. Organoleptic Test Assessment

Parameter				
Overall	**Color**	**Texture**	**Flavor**	**Aroma**
1 : really don't like it	1 : light green	1 : slightly crunchy	1 : slightly savory	1 : a bit typical Pak choy
2 : don't like it	2 : green	2 : quite crispy	2 : quite tasty	2 : quite typical pak choy
3 : don't like it	3 : dark green	3 : very crispy	3 : very tasty	3 : very typical pak choy
4 : like				
5 : really like it				

Source: results of research data processing 2023

Researchers distribute samples and assessment forms to the panelists who have been determined and will be filled in according to their respective criteria. There are 35 panelists who will fill out the form where the results will be averaged according to their respective parameters as well as calculating the standard deviation to determine the distribution of data in a sample which can make it easier to draw conclusions. Deviation standards can statistically measure how values are distributed from data. The smaller the standard deviation value, the smaller the variation in the data obtained and the greater the standard deviation, the more diverse the data obtained. The results of the panelists' assessment of the samples provided can be seen in Table 4.

Table 4. Organoleptic Test Results of Pak choy Vegetables

No.	**Score**				
	Overall	**Color**	**Texture**	**Flavor**	**Aroma**
1	4	1	2	2	1
2	4	1	2	3	1
3	4	2	2	3	2
4	4	2	2	3	2
5	4	3	2	3	1
6	4	1	2	2	3
7	4	1	2	2	3
8	4	2	2	3	3
9	4	2	2	3	3
10	4	2	2	2	3
11	5	1	3	3	3
12	5	1	3	3	3
13	4	1	3	3	3
14	5	1	3	3	2
15	4	1	2	2	3
16	4	2	2	3	3
17	4	2	2	3	2
18	4	2	2	2	3
19	5	2	3	3	3
20	5	1	1	1	3
21	5	1	3	3	3
22	5	1	3	3	1
23	4	2	2	2	3

No.	Score				
	Overall	Color	Texture	Flavor	Aroma
24	5	2	2	2	2
25	4	1	1	3	2
26	4	1	1	2	1
27	4	2	3	3	2
28	4	1	1	3	3
29	4	2	1	1	2
30	4	2	2	2	2
31	4	2	2	1	1
32	3	2	1	1	1
33	4	2	2	2	1
34	4	2	2	3	3
35	4	2	2	2	3
Average	**4.20**	**1.60**	**2.06**	**2.43**	**2.29**
Standard deviation	**0.47**	**0.55**	**0.64**	**0.70**	**0.83**

Source: Results of research data processing 2023

Table 5. Description of Organoleptic Test Results

Information	Parameter				
	Overall	Color	Texture	Flavor	Aroma
Average score (0 decimal)	4	2	2	2	2
Description	Like	green	quite crispy	quite tasty	quite typical pak choy

Source: Researcher data processing results 2023

After carrying out organoleptic tests on pak choy vegetables, the overall average rating was 4.20 & standard deviation 0.47, which showed the highest data was 4.67 and the lowest data was 3.73. Organoleptic test results for each parameter are rounded to simplify the description of the assessment and make it easier for researchers to draw conclusions. From the data obtained, the panelists assessed that the pak choy sample given had a fairly typical pak choy aroma, had a fairly savory taste and a fairly crunchy texture with a dominant green color and the overall assessment was that the panelists liked the pak choy sample given.

Table 6. Characteristics of Respondents

Respondents (35 people)									
Sex		Age					Work		
Man	Perem ma'am	17 - 25	26 - 35	36 - 45	46 - 55	IRT	Employee	Student	Lecturer
11	24	13	13	4	5	15	5	10	5

Source: Researcher 2023

CONCLUSION

The ingredients for pak choy sticks are pak choy, wheat flour, tapioca flour, corn flour, baking powder, chicken stock powder, garlic, salt, pepper, eggs, and margarine. The preparation involves mixing, kneading, flattening, cutting, and frying. The organoleptic test results showed an overall average rating of 4.20, indicating a generally positive reception by the panelists. The pak choy sticks had a distinctive aroma, savory taste, crunchy texture, and dominant green color.

From the results of the organoleptic test on pakchoy sticks, an overall average rating of 4.20 & standard deviation of 0.47 was obtained, which showed the highest data was 4.67 and the lowest data was 3.73. Organoleptic test results for each parameter are rounded to simplify the description of the assessment and make it easier for researchers to draw conclusions. From the data obtained, the panelists assessed that the pak choy sample given had a fairly typical pak choy aroma, had a fairly savory taste and a fairly crunchy texture with a dominant green color and the overall assessment was that the panelists liked the pak choy sample given.

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