



Analysis of Vegetable and Fruit Product Sales Hydroponics in the Time of the Covid-19 Pandemic (Case study: Sayuryuk. Com)

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The research objectives are: (1) to determine the sales conditions of Sayuryuk.Com hydroponic production during the Covid-19 pandemic; and (2) identify the impact in terms of sales such as price, product, promotion, quality and quality, distribution channels, and the number of requests felt by Sayuryuk.Com hydroponic business during the Covid-19 pandemic.

The research was carried out from June-August 2021 at Sayuryuk.Com, Bengkuring Housing Jl. Pakis Merah 19 No. 676, North Sempaja Urban Village, North Samarinda sub District, Samarinda City.

The data collected in this study consisted of: (1) primary data obtained from direct interviews with business owners Sayuryuk.Com; and (2) secondary data obtained from articles, journals, previous research, internet, and sales data from Sayuryuk.Com business management.

The method used in this research is descriptive quantitative method, and the data analysis used in this research is trend analysis with least square method.

The results showed that (1) the Covid-19 pandemic had a positive impact on Sayuryuk.Com's business. Sales results in general have increased every month. In fact, there was a sharp increase that occurred in July to 89.79% and August experienced an increase of 5.51% from July. The decline in several months was due to consumer saturation point for the products offered; and (2) the perceived impact on the sales aspect, namely: it takes additional costs and time in obtaining packaging materials, the Covid-19 pandemic does not have a significant effect on hydroponic product prices, promotions carried out during the pandemic are increasingly intense, coupled with the increasing number of collaborations, with various parties, one of which is banks to facilitate payment methods, product quality is increasing by carrying out a good packaging process, product distribution to consumers is carried out by adding one courier, the number of requests has increased, and the number of new consumers has increased during the pandemic.

Keywords: Hydroponics, Sales, Covid-19 Impact

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I. INTRODUCTION

Indonesia at the beginning of 2020 faced a crisis in the economic field caused by the Corona Virus Disease 2019 (COVID-19) pandemic. Covid-19 has caused an economic shock, affecting the economy of individuals, households, micro, small, medium and large companies, even affecting the country's economy with local, national, and even global coverage [1].

The agricultural sector plays a very important role in the overall national economy. This is indicated by the number of residents or workers in the agricultural sector [2]. During the Covid-19 pandemic, the agricultural sector became the highest contributor to national economic growth. The increase in the GDP of the agricultural sector successively in the first and second quarters of 2020 indicates a positive impact from the upstream, downstream side, and even agricultural support services [3].

The Covid-19 pandemic also had an impact on the agricultural sector, namely a decline in consumer demand. In this case the demand is not completely reduced, the agribusiness players see an increase in sales. One of them, namely hydroponic entrepreneurs. The increase in sales was due to the higher level of public awareness to maintain health during the pandemic. A healthy lifestyle which is now a trend in the midst of the Covid-19 pandemic has resulted in an increase in demand for hydroponic products [4].

People in various regions in Indonesia are also trying to start a hydroponic business. This is done as an effort to take advantage of free time amid the implementation of social distancing due to the pandemic.

Several methods are used in hydroponic cultivation, namely the wick system, the water culture system, the NFT system (nutrient film technique system), the drip irrigation system, the ebb and flow system, and aeroponic system [5].

Sayuryuk.Com is a supplier of vegetables, fruit and kitchen necessities that are packaged neatly, cleanly, and freshly, and sent directly to consumers. The marketing methods used are online and offline. This business provides two types of vegetable and fruit crops, namely hydroponic and conventional types that work directly with hydroponic farmers and conventional farmers in the vicinity. In marketing, Sayuryuk.Com also provides various vegetable packages from regular, medium, and large packages, as well as packages for other kitchen needs such as spices and side dishes. In addition to distributing vegetables and fruit as well as other kitchen needs, Sayuryuk.Com also provides education to consumers through its social media such as Instagram and Facebook.

The spread of Covid-19 greatly affects and has an impact on every sector, including the agricultural sector. Various positive and negative impacts are felt by farmers and business actors in the agricultural sector, one of which is the hydroponic business. The Covid-19 pandemic has affected the process of running a business, especially in terms of selling production products.

The objectives of the study were: (1) to determine the sales conditions of Sayuryuk.Com hydroponic production during the Covid-19 pandemic; and (2) identify the impact in terms of sales such as price, product, promotion, quality and quality, distribution channels, and the number of requests felt by the Sayuryuk.Com hydroponic business during the Covid-19 pandemic.

II. RESEARCH METHODS

A. Time and Place

The research was carried out from June-August 2021 at Sayuryuk.Com, Bengkuring Housing Jl. Pakis Merah 19 No. 676, North Sempajaurban village, North Samarindasub District, Samarinda City.

B. Data Collection Method

The data collected in this study consisted of: (1) primary data obtained from direct interviews with Sayuryuk.Com business owners; and (2) secondary data obtained from articles, journals, previous research, internet, and sales data from Sayuryuk.Com business management.

C. Sampling Method

The approach used is a case study; A case study is an in-depth exploration of a bound system based on extensive data collection. After the case is clearly defined, the researcher investigates in depth, usually using several data collection methods, such as interviews, field observations, and documentation [6]. The sampling method used is purposive sampling.

D. Data Analysis Method

The method used in this research is descriptive quantitative method, namely the method of explaining, describing, and interpreting a phenomenon that occurs in an object and data [7]. Data obtained from documents owned by Sayuryuk.Com in the form of sales reports and descriptions of interview results. The data analysis used in this study is trend analysis using the least square method.

III. RESULTS AND DISCUSSION

A. General History Sayuryuk.Com

Sayuryuk.Com is an individual business in the field of commodities located in Bengkuring Housing Jl. Pakis Merah 19 No. 676. This business is located in North Sempajaurban village, North Samarindasub District, Samarinda City.

Mr. Falah's reason for establishing Sayuryuk.Com in 2019. Another goal of establishing Sayuryuk.Com is to cut the supply chain. Hydroponic businesses can distribute their harvests directly to consumers without going through middlemen or collectors, so the prices they get are also cheaper.

During the first year (2019), Sayuryuk.Com is still very focused on educating the public about what hydroponics is and the benefits and advantages of hydroponics and has not focused too much on sales results. By looking at market demand, Sayuryuk.Com started selling various types of vegetables including conventional vegetables and other kitchen needs. In the era of digitalization, the online sales method is one of the strategies implemented by Sayuryuk.Com. This strategy is used to make it easier for the community to meet their kitchen needs. There are not many consumer patterns for the need for vegetable products in the digital era, so it is necessary to conduct market education so that people know that shopping for kitchen needs can be done without having to go to the market.

Sayuryuk.Com continues to grow to this day and builds cooperation with a partnership system both with agencies and other individual businesses. Partnerships with institutions, namely banks for digital services such

as oVo, GoPay, and so on. Sayuryuk.Com also collaborates with several brands and influencers as one of the strategies used to promote their products.

B. Sayuryuk.Com Products

Sayuryuk.Com is a supplier of kitchen necessities that provides various types of fresh vegetables and fruits that are packaged cleanly and neatly. This business provides vegetables and fruit both conventionally and hydroponically as well as with various variants of family packages. In addition Sayuryuk.Com also provides various other needs such as chicken, meat, seafood, herbs & spices, animal products, vegetable products, bakery, instant products, snacks and others.

1) Conventional Plant Products

Types of vegetable products that are often consumed by the community such as *kangkung*, spinach, mustard greens, pakchoy, and others. The fruit provided is usually in the form of fruit such as apples, bananas, mangoes, pears, guavas and others.

2) Hydroponic Plant Products

The type of hydroponic plant products provided are adjusted to the supply of partners. In marketing, this type of hydroponic product is packaged in packs with units of grams. Some of the hydroponic vegetables and fruits provided by Sayuryuk.Com are: baby spinach, green spinach, red spinach, *caisim*, basil leaves, mint leaves, *kalian*, kale, *kangkung*, *naibai*, pakcoy, mustard greens, mustard sambong, leaf lettuce, lettuce *lolorosa*, romaine lettuce and celery, melon, zucchini and cherry tomatoes.

3) Package Variants

Sayuryuk.Com also provides various package variants including vegetable packages, protein & side dishes, fruit packages, and mixed packages with various sizes such as small, regular and big. Vegetable packages are divided into two types, namely fresh vegetable packages and ready-to-eat packages. Packages of fresh vegetables are available in the form of packages per day, per 3 days and per week. Protein & side dishes are available in the form of fresh protein packages and ready-to-eat protein packages. The fruit package is divided into two variants, namely the fresh fruit package with small, regular, big size variants, and the cut fruit package.

C. Sayuryuk.Com Sales Trend Analysis

In collecting data, researchers use a lot of documentation methods and ask questions based on sales objective data. This is used to dig up detailed information based on sales results for the period of 4 months before the pandemic, namely January to April 2020, with the consideration that in April the City of Samarinda still had not implemented large-scale social restrictions (PSBB) [8], and 4 months during the pandemic, i.e. from May to August 2020. Trend values and sales results from January to August 2020 include:

Table 1. Hydroponic Sales Results Before and During the Covid-19 Pandemic

	Month	Sales results (Rp)	%
Before the Covid-19 Pandemic	January	4.124.000	-
	February	4.275.000	3,66
	March	4.345.000	1,6
	April	4.393.000	1,1
During the Covid-19 Pandemic	May	4.256.000	-3,1
	June	4.124.000	-3,1
	July	7.827.000	89,79
	August	8.259.000	5,51

Source: Secondary Data (2021)

Based on the data above, it can be concluded that the percentage of sales of Sayuryuk.Com hydroponic products in February increased by Rp. 151,000 or an increase of 3.66% from January. In March, there was an increase of Rp. 70,000 or an increase of 1.6%. In April, it decreased by Rp. 48,000 or decreased by 1.1%. In May, it decreased by Rp. 137,000 or decreased by 3.1% from April. In June, it decreased again by Rp. 132,000 or decreased by 3.1%. In July, it experienced a high increase of Rp. 3,703,000 or an increase of 89.79% from June. In August, resale experienced an increase of Rp. 432,000 or an increase of 5.51% from July.

Furthermore, to determine the trend using the least square method (least square method).The following is the component of the least square method, where Y is the actual data from the sales of Sayuryuk.Com Hydroponics.

Table 2.Least Square Method Sales

Month	Sales results (Rp) (Y)	X	XY	X ²	
January	4.124.000	-7	-28.868.000	49	
Before the Covid-19 Pandemic	February	4.275.000	-5	-21.375.000	25
	March	4.345.000	-3	-13.035.000	9
	April	4.393.000	-1	-4.393.000	1
May	4.256.000	1	4.256.000	1	
During the Pandemic Covid-19	June	4.124.000	3	12.372.000	9
	July	7.827.000	5	39.135.000	25
	August	8.259.000	7	57.813.000	49
Total	41.603.000	0	45.905.000	168	

Source: Primary Data, processed (2021)

Based on the calculation results obtained the following equation :

$$Y' = 5.200.375 + 273.244X$$

Table 3.Sayuryuk.Com Sales Trend

Month	Sales Results (Rp)	Trend	Variance
January	4.124.000	3.287.667	836.333
Before the Pandemic Covid-19	February	3.834.155	440.845
	March	4.380.643	-35.643
	April	4.927.131	-534.131
May	4.256.000	5.473.619	-1.217.619
During the Pandemic Covid-19	June	6.020.107	-1.896.107
	July	6.566.595	1.260.405
	August	7.113.083	1.145.917
Total	41.603.000	41.603.000	0

Source: Research Results, processed (2021)

Based on the analysis above, it can be seen the difference between the actual data from operating income and forecasting data (Trend). Before the pandemic, in January the sales result was Rp. 4,124,000, while the forecasting data was Rp. 3,287,667 with a variant of Rp. 836,333. In February the sales results obtained were Rp. 4,275,000, while the forecasting data was Rp. 3,834,155 with a variant of Rp. 440,845. In March and April sales results did not reach the trend value. Forecasting data in March amounted to Rp 4,380,643, while sales results were Rp 4,345,000. In April the forecasting data showed a result of Rp. 4,927.131 while the sales result was Rp. 4,393,000.

During the pandemic, there were sales results that did not reach the trend, namely in May the sales trend was IDR 5,473,619, while the sales results obtained were only IDR 4,256,000. And in June the sales trend was IDR 6,020,107, while the sales results obtained were only IDR 4,124,000. In July and August sales results reached trend values. In July the sales trend was Rp. 6,566,595, while the sales results obtained were Rp. 7,827,000 with a variant of Rp. 1,260,405. In August, the trend was Rp. 7,113,083, while the sales results were

Rp. 8,259,000 with a variant of Rp. 1,260,405. In August the trend was Rp. 7,113,083, while the sales results were Rp. 8,259,000 with a variant of Rp. 1,145,917.

Based on the results of the study, the sales of Sayuryuk.Com hydroponic products 4 months before and 4 months during the pandemic generally showed an increase every month. However, sales experienced a decline in May with a figure of Rp 4,256,000, down from the previous month of Rp 4,393,000 and in June with a figure of Rp 4,124,000, down from the previous month of Rp 4,256,000. Based on the interview results, the decline was caused by the consumer's saturation point for the products offered by Sayuruk.Com. Consumers feel the need for new innovations from the products offered. In addition, the lack of attention to old consumers is due to being too focused on educating new consumers.

Based on the calculation of the sales trend from January to August, the trend line shows a positive trend because the trend line starts from the bottom left to the top right. Judging from the trend value graph, there were several sales results that did not reach the trend value, namely in March, April, May and June. In January, sales results reached a trend value of Rp. 836,333. In February, sales increased and reached a trend value of Rp. 440,845. In March, sales results increased, but did not reach the trend value of Rp. 35,643. In April, sales results increased, but did not reach the trend value of Rp 534,131. The month of May experienced a decline and sales results did not reach the trend of Rp. 1,217,619. In June again experienced a decline and sales results did not reach the trend of Rp. 1,896,107. In July sales increased by 89.79% and reached a trend value of Rp 1,030,980. In August, resale increased by 5.51% and reached a trend value of Rp. 1,145,917. The sharp increase in July and August was due to the addition of several new products or items. In addition, the number of requests for hydroponic products is also increasing because people are starting to care about a healthy lifestyle during the Covid-19 pandemic. The addition of this product or item is done as a form of marketing strategy implemented by Sayuryuk.Com.

The Covid-19 pandemic does not really affect the sales results for hydroponic products. On the other hand, the perceived impact tends to be positive. This is due to increasing public interest, especially the upper middle class. For the community, Sayuryuk.Com is a forum that provides convenience with online shopping and saves time and energy. However, with the Covid-19 pandemic, it also has a negative impact on Sayuryuk.Com.

IV. CONCLUSIONS AND SUGGESTIONS

A. Conclusion

1. The Covid-19 pandemic has had a positive impact on Sayuryuk.Com's business. Sales results in general have increased every month. There was even a sharp increase that occurred in July to 89.79% and August experienced an increase of 5.51% from July. The decline in May and June 2021 was due to consumer saturation points for the products offered. In addition, the lack of attention to old consumers results in a reduced level of consumer loyalty in making purchases.
2. The perceived impact on the sales aspect is:
 - a. It takes additional costs and time in obtaining packaging materials.
 - b. The Covid-19 pandemic does not have a significant effect on the price of hydroponic products so that the price offered remains the same.
 - c. Promotions carried out during the pandemic are increasingly intense, coupled with the increasing number of collaborations with various parties, one of which is banks to simplify payment methods.
 - d. Product quality is increasing by carrying out a good packaging process so that the consumption rate reaches 100%.
 - e. Distribution of products to consumers is done by adding one courier.
 - f. The number of requests has increased, this is due to the increasing public awareness of the importance of maintaining health during the pandemic by consuming vegetables, especially hydroponics.
 - g. Consumers, the increasing number of new consumers during the pandemic

B. Suggestion

1. It is expected to create new product innovations so that consumers are not saturated with the products offered.
2. Cooperating with farmers in economic development during the Covid-19 pandemic.
3. For further researchers to be able to focus further on marketing strategies that can still be developed their potential.

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