Rice Marketing Strategy through E-Commerce as an Effort to Improve Farmers' Welfare: A Case Study of Rice Farmers in Serdang Bedagai Regency. Rice Farmers in Serdang Bedagai Regency
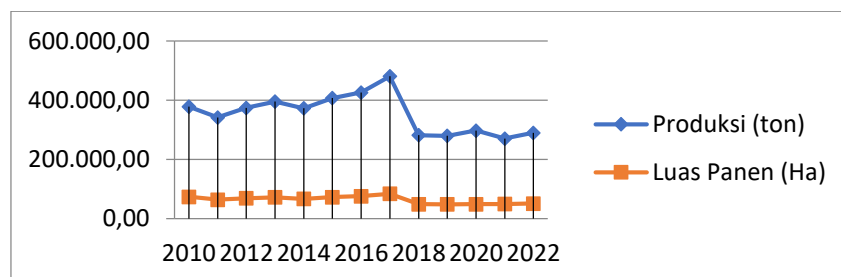
Yeni Rachmawati[1], Flora Silalahi[2], Fahra Az-zahra[3]

[1,2,3]Administrasi Bisnis, Bisnis Digital, Politeknik LP3I Medan, Jln. Sei Serayu No. 48D, Medan, Sumatera Utara

Article Info	ABSTRACT
Keywords: Strategy, Marketing, Rice, E-Commerce, Farmers.	This study analyzes internal and external factors that can affect agricultural businesses in Melati 2 Hamlet using the SWOT analysis method supported by the IFAS and EFAS matrices. Based on the results of the study, it was found that farmers in Melati 2 Hamlet have very good internal strengths, indicated by the existence of well-coordinated farmer groups, long experience of farmers and the readiness and willingness of farmers to make marketing innovations. The IFAS score of 3.70 indicates that the internal strengths of farmers are very strong so that they can overcome the weaknesses that farmers have in the form of limited equipment and capital. The EFAS score of 3.55 indicates that there are great opportunities that can be utilized such as technological advances and easy internet access. Strategic recommendations from the results of the SWOT analysis using the IFAS and EFAS matrices are the use of technology and e-commerce, collaboration with agricultural extension workers and optimization of administrative processes. The existence of the right strategy is expected to improve the welfare of farmers in Melati 2 Hamlet, Perbaungan Sub-District, Serdang Bedagai Regency.
	Corresponding Author: Yeni Rachmawati Politeknik LP3I Medan Jln. Sei Serayu No. 48 D Medan Yeni.rachmawati44@gmail.com

INTRODUCTION

Rice is one of the food commodities produced in North Sumatra. There are 22 regencies/cities in North Sumatra. One of the rice-producing districts in North Sumatra is Serdang Bedagai district. Serdang Bedagai district is the second rice production center after Deli Serdang district. According to data obtained from the Central Bureau of Statistics of Medan, Serdang Bedagai Regency achieved high rice production in 2017, which was 480,739.6 tons. Rice paddy production in Serdang Bedagai Regency in the period 2010-2022 is as follows:

Rice Marketing Strategy through E-Commerce as an Effort to Improve Farmers' Welfare: A Case Study of Rice Farmers in Serdang Bedagai Regency. Rice Farmers in Serdang Bedagai Regency—Yeni Rachmawati et.al

686 | P a g e

Production and Harvested Area of Rice in Regency Serdang Bedagai

Based on Figure 1 above, it shows that there are fluctuations in the amount of production and harvest area of rice in Serdang Bedagai district. The decrease in production is in line with the decrease in rice harvest area. Fluctuations in rice production can cause price fluctuations. According to Brianto (2015), 65% of rice prices in 32 provinces can be explained by rice production, rice consumption and rice imports. Handika (2021), the results of his research also show that the rice production variable partially has a significant effect on rice prices in Indonesia in 200 - 2018. Based on these two studies, it can be concluded that the price of rice has a correlation with the amount of rice produced.

Rice price fluctuations are not only caused by the amount of rice production, but there are also other factors that affect it. The difference in the price of rice prevailing in farmers and the price of rice in the market is very significant. The difference in farmers' rice prices and consumer retail prices obtained from the North Sumatra Central Bureau of Statistics can be seen in the table below:

Table 1. Producer Price and Retail Price of Rice in Medan City in 2010-2022

No	Year	Producer Price per 1kg (IDR)		Retail Price per 1 kg (IDR)	
1	2010	Rp	3.937,50	Rp	6.838,41
2	2011	Rp	4.366,67	Rp	7.839,75
3	2012	Rp	4.082,47	Rp	9.391,20
4	2013	Rp	4.623,37	Rp	9.664,86
5	2014	Rp	4.938,22	Rp	10.412,96
6	2015	Rp	5.163,47	Rp	10.986,99
7	2016	Rp	5.325,00	Rp	10.986,99
8	2017	Rp	5.949,81	Rp	11.404,75
9	2018	Rp	5.663,60	Rp	12.504,55
10	2019	Rp	5.703,90	Rp	12.568,18
11	2020	Rp	5.377,34	Rp	12.647,35
12	2021	Rp	5.327,66	Rp	12.609,05
13	2022	Rp	5.465,53	Rp	12.853,03

Table 1 above shows that there is a significant price gap between producer and retail prices. The difference in rice prices is partly due to rice marketing activities. Agricultural marketing is the process of distributing agricultural commodities carried out by marketing institutions accompanied by the transfer of property rights and the creation of time use, place use and form use by carrying out one or more marketing functions (Anggi in Sholehah, 2021).

Rice Marketing Strategy through E-Commerce as an Effort to Improve Farmers' Welfare: A Case Study of Rice Farmers in Serdang Bedagai Regency. Rice Farmers in Serdang Bedagai Regency—Yeni Rachmawati et.al

687 | P a g e

According to Karimudin (2020), states that rice marketing institutions have formed a marketing pattern consisting of four marketing channels and factors that have a significant effect on the pattern of rice marketing channels are selling prices at the farm level, marketing margins and marketing efficiency. Another study by Aprilani (2020), stated that farmers have a weak role in determining the price of rice because the price of rice is controlled by agents and large factory owners. These two studies illustrate that farmers do not have a power in determining the price of rice, so farmers' income is largely determined by other marketing actors.

The marketing and income problems of farmers described by previous studies are also experienced by Melati 2 Hamlet, Perbaungan Sub-district, Serdang Bedagai Regency. Melati 2 hamlet is the largest hamlet in Perbaungan sub-district that produces rice. The problem faced by farmers in Melati 2 Hamlet is that farmers are forced to sell their paddy production to middlemen because farmers have limited harvesting equipment. In addition, there is also a need to sell the harvest quickly so that the money from the sale of the harvest can be used directly to meet daily needs. Meanwhile, when selling crops to the government / Bulog, farmers cannot get money from the sale of paddy production because of the administrative bureaucracy that takes several days to disburse the money from the sale of rice production.

METHODS

This research is quantitative and qualitative research using questionnaire research instruments and interview forms. This research was conducted in Melati 2 Hamlet, Perbaungan District, Serdang Bedagai Regency. The selection of the research site was carried out deliberately with the consideration that Melati 2 hamlet is a hamlet that has the largest number of rice farmers and produces a lot of rice production. Information obtained from respondents, then analyzed by SWOT analysis using IFAS (Internal Factors Analysis Strategic) and EFAS (External Factors Analysis Strategic).

SWOT analysis is used to identify various internal and external factors that influence farmers in rice marketing activities so that rice marketing strategies can be formulated as an effort to improve farmers' welfare. To formulate the rice marketing strategy, a SWOT matrix approach was used as follows:

Table 2. SWOT Analysis

	Strength (S)	Weakness (W)
Opportunities (O)	Strategy (SO)	Strategy (WO)
	Formulate strategies by using strengths and capitalizing on opportunities	Formulate strategies by minimizing weaknesses and taking advantage of opportunities
Threats (T)	Strategy (ST)	Strategy (WT)
	Formulate strategies by using strengths to overcome threats	Formulate strategies using threats to avoid threats

Rice Marketing Strategy through E-Commerce as an Effort to Improve Farmers' Welfare: A Case Study of Rice Farmers in Serdang Bedagai Regency. Rice Farmers in Serdang Bedagai Regency—Yeni Rachmawati et.al

688 | P a g e

According to Afifah in Rangkuti (2023), the steps of using the IFAS matrix are as follows:

1. Identification of internal factors through strengths and weaknesses owned by farmers in Melati 2 Hamlet
2. Weight each internal factor with a value of 0 - 1, based on how important or unimportant the condition is. The total weight of all factors must equal 1
3. Rate each factor based on how good or bad the condition is. Values usually range from 1 (very poor) to 4 (very good)
4. Calculate the total score by multiplying the weight of each factor with the rating given to get the total score
5. Sum up all the total scores to get the total IFAS score.
   Meanwhile, the steps for using the EFAS matrix are as follows:
1. Identify external factors by determining opportunities and threats.
2. Weight each external factor with a value between 0 and 1 based on how important it is to the farmer. The total weight of all factors must equal 1.
3. Rate each factor based on how well the farmer handles the factor. Values usually range from 1 (very bad) to 4 (very good).
4. Calculate the total score by multiplying the weight of each factor by the rating given to get the total score.
5. Add up all the total scores to get the total EFAS score.

RESULTS AND DISCUSSION

Results

Based on the results of interviews conducted with rice farmers in Melati 2 Hamlet, Perbaungan Sub-district, Serdang Bedagai Regency, the following information was obtained:

Table 3. Farmer SWOT Analysis

	Strength (S)	Weakness(W)
	1. Large number of farmer groups 2. Farmer groups have a regular monthly meeting schedule 3. Farmers are well organized in farmer groups 4. Farmers have been running an agricultural business for more than 20 years. 5. No constraints on water irrigation issues. 6. Farmers are assisted by other workers in working on	1. Farmers have limited equipment and or tools to process agricultural products 2. Farmers lack capital 3. Farmers market agricultural products to middlemen because they need quick money to meet their daily needs 4. Farmers do not sell their unhulled rice to the government because the administrative process is

Rice Marketing Strategy through E-Commerce as an Effort to Improve Farmers' Welfare: A Case Study of Rice Farmers in Serdang Bedagai Regency. Rice Farmers in Serdang Bedagai Regency–Yeni Rachmawati et.al

689 | P a g e

	Strength (S)	Weakness(W)
	the farm. 7. There are no problems with rice production. 8. Farmers have communication tools that are connected to the internet. 9. Farmers are willing to make innovations in marketing their agricultural products.	long and takes several days. 5. Farmers do not have many choices in selling their agricultural products. 6. The average farmer has reached the age of 50 years and above.
Opportunities (O) 1. Melati 2 Hamlet is a hamlet that conducts rice cultivation business. 2. Has an active agricultural extension worker. 3. The existence of an internet network that can connect anywhere and with anyone. 4. Advances in technology make it easy to get unlimited information 5. The existence of various social media and e-commerce platforms. 6. Many sellers market their products online. 7. Online sales are a trend and are in great demand in today's society.	**Strategy SO** 1. Optimizing the use of social media 2. Provide training on the use of social media and e-commerce platforms to farmers 3. Optimizing the role of agricultural extension officers in providing training and guidance through regular farmer group meetings 4.	**Strategy SW** 1. Procure farm equipment through government assistance programs 2. Developing programs in collaboration with financial institutions or investors to facilitate farmers' access to capital
Threats (T) 1. There are only 2 middlemen who usually collect farmers' produce.	**Strategy ST** 1. Develop alternative marketing channels that can market products directly to consumers through online	**Strategy WT** 1. Farmers through farmer groups work with the government to make sales administration easier and

Rice Marketing Strategy through E-Commerce as an Effort to Improve Farmers' Welfare: A
Case Study of Rice Farmers in Serdang Bedagai Regency. Rice Farmers in Serdang Bedagai
Regency–Yeni Rachmawati et.al

690 | P a g e

	Strength (S)		Weakness(W)
2. Rice prices fluctuate and tend to rise	marketing		faster.
3. The price of input materials fluctuates.	2. Create training and youth empowerment programs to increase the interest and participation of the younger generation in the agricultural sector		2. Farmers diversify their income by planting other crops besides rice that have a high and more stable selling value.
4. Rice imports are still ongoing.			
5. Young generation reluctant to become farmers.	3. Create a program to provide incentives and easy access to technology to young people who participate in the agricultural sector 3.		3. Provide training on agricultural risk management to farmers.
6. The administrative process at the government takes a long time			

Based on the results of the SWOT analysis that has been carried out, the IFAS matrix obtained is as follows:

Table 4. IFAS (Internal Factors Analysis Strategic) Matrix

Internal Factors	Bobot	Rate	Total Scor
Strength			
Large number of farmer groups	0,10	4	0,40
Farmer groups have a regular meeting schedule	0,10	3	0,30
Farmers are well organized in farmer groups	0,10	4	0,40
Farmers have been in farming for more than 20 years	0,10	4	0,40
No constraints on water irrigation issues	0,10	4	0,40
Farmers are assisted by other workers in working on the farm	0,10	3	0,30
No problem in rice production	0,10	4	0,40
Farmers have mobile phones that are connected to the internet	0,10	3	0,30
Farmers willing to innovate in rice marketing	0,10	3	0,30
Weakness			
Farmers' equipment and tools in processing agricultural products are limited	0,10	2	0,20
Farmers lack capital	0,15	2	0,30
Farmers sell their grain to middlemen	0,10	1	0,10
Farmers do not sell agricultural products to the government because of the lengthy administrative process	0,10	1	0,10
Farmers do not have many options in selling their agricultural products	0,10	2	0,20
The average farmer has reached the age of 50 years and above	0,10	2	0,20
Total	1,00	-	3,70

Based on the results of the SWOT analysis that has been carried out, the EFAS matrix obtained is as follows:

Rice Marketing Strategy through E-Commerce as an Effort to Improve Farmers' Welfare: A Case Study of Rice Farmers in Serdang Bedagai Regency. Rice Farmers in Serdang Bedagai Regency–Yeni Rachmawati et.al

691 | P a g e

Table 5. EFAS (External Factors Analysis Strategic) matrix

Internal Factors	Bobot	Rating	Total Scor
Peluang			
Melati 2 Hamlet is the center of rice production in Perbaungan Sub-district, Serdang Bedagai Regency.	0,10	4	0,40
Extension workers play an active role in farmer groups	0,15	3	0,45
The existence of an internet network that can connect to anyone and anywhere	0,15	3	0,45
Technological advances provide easy access to information without limits	0,10	4	0,40
Social media and e-commerce platforms	0,15	3	0,45
Many sellers market their products online	0,10	3	0,30
Online sales are trending and in high demand in today's society.	0,15	3	0,45
Threats			
There are only 2 middlemen who accommodate farmers' produce.	0,10	2	0,20
Rice prices fluctuate and tend to increase	0,10	2	0,20
Input material prices fluctuate	0,10	2	0,20
Rice imports are still ongoing	0,10	2	0,20
Young generation reluctant to become farmers	0,10	1	0,10
Administrative processes in the government take a long time	0,10	1	0,10
Total	1,00	-	3,55

Discussion

Based on table 4 of the IFAS matrix obtained a total score of 3.70, this shows that the internal strengths of farmers in Melati Hamlet 2 Perbaungan sub-district, Serdang Bedagai Regency are very good because in the rating scale used, a value of 4 indicates a very good condition in the internal farmers. Strength factors owned by farmers can be concluded very strong and dominant so that it can overcome the weaknesses that exist in the internal environment of farmers. This also provides a strong foundation for farmers to take advantage of opportunities and face external challenges more effectively. As for what supports internal conditions to be very good, namely:

1. Strong internal conditions

   Strong internal conditions are indicated by well-organized farmer groups that support cooperation and effective coordination among farmers. In addition, the experience of farmers who have been practicing agriculture for more than 20 years shows that farmers have expertise in rice cultivation. Rice farming activities in Melati 2 Hamlet are also supported by the existence of well-organized water irrigation, so that farmers do not experience problems in irrigation.

2. Effective handling of weaknesses

   Farmers in Melati 2 hamlet have several weaknesses while practicing rice farming, such as limited capital, incomplete harvesting equipment and the lack of market

Rice Marketing Strategy through E-Commerce as an Effort to Improve Farmers' Welfare: A Case Study of Rice Farmers in Serdang Bedagai Regency. Rice Farmers in Serdang Bedagai Regency—Yeni Rachmawati et.al

692 | P a g e

options in selling crops because they have only been sold to middlemen. Although farmers have weaknesses, the high rating score indicates that the positive factors or strengths owned by farmers are more dominant and can cover the weaknesses owned by farmers. The openness and availability of farmers in making marketing innovations and supported by farmers' communication tools that are connected to the internet show marketing innovations by utilizing technology potentially carried out by Melati 2 hamlet farmers.

Based on table 5 of the EFAS matrix table, a score of 3.55 is obtained, indicating that farmers have a great opportunity to take advantage of positive external factors, although there are threats to watch out for. The following is an explanation of the EFAS score:

1. Strong opportunity
   Strong opportunities are supported by the potential of villages suitable for rice cultivation, the existence of agricultural extension workers who actively coordinate with farmers, easy access to the internet and technology that can provide more benefits to farmers, and the existence of various social media and e-commerce that can be used to market products with a wider market reach.
2. Ability to capitalize on opportunities
   The EFAS score of 3.55 indicates that farmers have a good ability to capitalize on existing opportunities including integrating new technologies and marketing methods into farming practices effectively and efficiently.
3. Controlled threat
   A controlled threat means that although farmers in Melati 2 Hamlet sell their crops to 2 (two) middlemen, this can be overcome by utilizing the e-commerce platform to sell their crops directly to consumers.

CONCLUSION

Based on the results of research that has been done by analyzing the strengths, weaknesses, opportunities and threats (SWOT) using the IFAS and EFAS matrices, the results show that farmers have very good internal strengths as shown by the IFAS score of 3.70. While the EFAS score of 3.55 indicates that marketing innovations by utilizing technology have the opportunity to be carried out and can increase farmers' income, although there are weaknesses in terms of equipment and capital. Therefore, strategic recommendations that can be made are to utilize technology and e-commerce, collaboration with agricultural extension workers and optimization of administrative processes, so that the right strategy can increase the potential of agriculture in Melati 2 Hamlet and improve farmers' welfare.

REFERENCE

Afifah, N., & Formen, A. (2023). Penggunaan Matrik IFAS dan EFAS untuk Analisis SWOT Sarana dan Prasarana di Satuan PAUD. *Jurnal Ilmu Sosial dan Humaniora*, *1*(2), 47-60.

Rice Marketing Strategy through E-Commerce as an Effort to Improve Farmers' Welfare: A Case Study of Rice Farmers in Serdang Bedagai Regency. Rice Farmers in Serdang Bedagai Regency—Yeni Rachmawati et.al

693 | P a g e

Aprilani, P. (2020). Strategi Pengembangan Pemasaran Padi Rawa Pasang Surut Binaan Delta Kayan Food Estate di Desa Tanjung Buka Sp. 1 Kecamatan Tanjung Selor Kabupaten Bulungan (doctoral dissertation, universitas gadjah mada).

Basmalah, N. F., Fauziyah, E., & Zuhriyah, A. (2023). Strategi Pengembangan Sektor Pertanian Di Desa Tlontoraja, Kabupaten Pamekasan. *AGRICA*, *16*(2), 121-139.

Dewi, T. R., & Wardani, I. (2023). Analisis Strategi Pemasaran Padi Desa Bulukerto Kecamatan Bulukerto. *Jurnal Agronomika*, *21*(01), 1-7.

Irawan, D. (2023). Strategi Pemasaran Dalam Meningkatkan Penjualan Padi Di Desa Sumbersari Kecamatan Srono Kabupaten Banyuwangi. *JEKOBIS: Jurnal Ekonomi dan Bisnis*, *2*(1).

Karimudin, Y. (2020). Pola Saluran Pemasaran Beras di Kecamatan Tanjung Lago, Kabupaten Banyuasin. *Jurnal Ilmiah Manajemen*, *17*(2), 239-264.

Safitri, S. E., & Wartapa, A. (2021, September). Strategi Pengembangan Pemasaran Usaha Perbenihan Padi Gapoktan Pandowo Mulyo Kelurahan Pandowoharjo, Kapanewon Sleman, Kabupaten Sleman. In *Prosiding Seminar Nasional Pembangunan dan Pendidikan Vokasi Pertanian* (Vol. 2, No. 1, pp. 83-93).

Sholehah, N. A., Nasirudin, M., & Naim, M. A. (2021). Strategi Pemasaran Beras Organik di Desa Bareng Kecamatan Bareng Kabupaten Jombang. *Sigmagri*, *1*(2), 93-101.

Syaputra, A., Lubis, Y., Salqaura, S. S., & Hermanto, B. (2023). Strategi Peningkatan Produktivitas Petani Padi Sawah Terhadap Peranan Kelompok Tani di Desa Melati II. *Jurnal Ilmiah Pertanian (JIPERTA)*, *5*(1), 39-49. Wiswasta, I. G. N. A., Agung, I. G.