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Sustainability of the Healthy Rice Plantation Program in Klungkung Village, Sukorambi Subdistrict, Jember Regency

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Abstract: Healthy rice is a solution to the problems and challenges in rice farming faced in the Sukorambi District area to increase yields without damaging the ecosystem. This study aims to determine the driving factors and inhibitors of the sustainability of healthy rice programs in Sukorambi District, Jember Regency. This research uses the Force Field Analysis (FFA) method with a total sample of 20 healthy rice farmers from 6 farmer groups in Sukorambi District. The selection of locations in Sukorambi District with consideration to encourage farmers to apply environmentally friendly healthy rice cultivation in Sukorambi District. The results showed that: (1) Assistance by PPL obtained the highest TNB as a driving factor for the sustainability of the healthy rice program, namely 2.04% (2) The length of time required to make organic fertilizer obtained the highest TNB as an inhibiting factor. Farmers together with farmer groups need to maximize assistance by PPL and minimize the time to make organic fertilizer. To realize the sustainability of the healthy rice program, it is recommended to maintain assistance by PPL on a regular basis and design an organic fertilizer composition that has a faster production process.

Keywords: FFA, Rice, Healthy Plant

INTRODUCTION

Rice is a rice-producing food crop commodity that plays an important role in Indonesia's economic life. Rice as a staple food is very difficult to replace by other staples. Among them are corn, tubers, sago and other carbohydrate sources. So that the existence of rice is the main priority of the community in meeting the needs of carbohydrate intake that can satiate and is the main source of carbohydrates that are easily converted into energy. Rice as a food crop is consumed by approximately 90% of the total population of Indonesia for daily staple food (Donggulo et al., 2017). (Donggulo et al., 2017).

Based on data from the Central Bureau of Statistics (2020) in 2020, rice production in Indonesia increased to 31.62 million tons. This increase is due to population growth outpacing food supply, so the demand for rice continues to rise. The demand for rice across Indonesia continues to grow in line with the country's growing population. This raises concerns about the availability of adequate rice if the increase in national rice demand is not matched by an adequate increase in rice production.

So important and strategic is the role of fertilizer in increasing rice production that the government continues to encourage the use of fertilizers by issuing several policies including fertilizer subsidies. The policy of providing fertilizer subsidies has been going on for many years and every year the budget provided tends to increase. However, in its implementation, several problems are still found, including: fertilizer scarcity in some agricultural centers, fertilizer smuggling abroad, price hikes above the Highest Retail Price (HET), seepage of subsidized fertilizers into non-subsidized markets and between regions. (Darwis & Supriyati, 2016).

In response to this, since 2022 the government through the policy regulation of the Minister of Agriculture Regulation No. 10 of 2022 began to limit the provision of subsidized fertilizers, therefore farmers formed a healthy crop program. The sustainability of the healthy crop program, as experienced similarly in Klungkung Village, Sukorambi District, Jember Regency is also an important focus in maintaining and developing sustainable agricultural efforts in the region. By implementing the healthy crop program, it is expected to create an environmentally friendly agricultural ecosystem, improve the quality of agricultural products, and help meet the food needs of the community in a sustainable manner. Based on this, the researcher wants to conduct research on the Sustainability of the Healthy Crop Program in Klungkung Village, Sukorambi District, Jember Regency. The purpose of this research is to find out what factors are driving the sustainability of the healthy plant program in Klungkung Village, Sukorambi District, Jember Regency.

METHOD

The research method used is quantitative descriptive method. The research location was carried out in Sukorambi District, Jember Regency. The sample obtained in this study was determined by quota sampling (non-random sampling technique), namely 2 farmer group members taken from each farmer group. There were 4 farmer groups in Klungkung Village and 6 groups in Karangpring Village, so the total sample size was 20 people. . This sample consists of 20 farmer group members who apply healthy rice farming. Data analysis used to answer the first and second objectives is to use Force Field Analysis (FFA) to determine the driving factors and inhibitors of the sustainability of healthy crop programs in Klungkung Village, Sukorambi District, Jember Regency. Furthermore, to answer the third objective, the driving and inhibiting factors were assessed based on the score.

RESULTS AND DISCUSSION

Driving Factors Affecting the Sustainability of the Healthy Rice Plantation Program

Based on the Forum Group Discussion (FGD) with healthy rice farmers during the anjangsana event in Sukorambi sub-district, 4 driving factors were obtained, namely,

3.1.1 Soil fertility decline (D1)

Soil conditions that are less fertile require nutrients. Organic matter content is the most indicator of soil fertility and in the soil there are organic materials that can be a source of nutrients (Purba, 2021), but over time and long-term and sustainable use of chemicals results in disruption of the balance of nutrients in the soil and causes disease for the plants themselves (Fahrizal, 2019). Therefore, it is necessary to improve soil texture and structure by reducing the application of chemicals and of course the routine use of organic materials.

3.1.2 Assistance by Practice Field Experient (PPL) (D2)

Assistance by PPL in Sukorambi Sub-district became a driving factor in the healthy rice plant program because PPL has an important role in the socialization of healthy plants. In the socialization of healthy crops in Sukorambi District, Jember Regency, PPL plays a major role in providing motivators to provide input, advice, and conducting reviews to farmers' land is very influential in farming activities. PPLs make members aware of being active and participative in farmer group activities as a tactical step to increase the enthusiasm of farmers in conducting healthy rice farming in Sukorambi District, Jember Regency.

3.1.3 High price of fertilizer (D3)

The high price of fertilizer is a driving factor in the healthy rice program in Sukorambi Subdistrict because with the high price of fertilizer, farmers can be diverted by making their own organic fertilizer. The solution to overcome the high price of fertilizer in the market and the reduction in the amount of subsidized fertilizer is to utilize organic waste in the surrounding environment to be used as organic fertilizer and can replace chemical fertilizers.

3.1.4 Ease of Making Organic Fertilizer (D4)

The manufacture of organic fertilizer in Sukorambi Subdistrict uses animal manure waste as the main raw material which is abundant at the location, including supporting mixtures that are also easily available. The materials used by farmers in Sukorambi Subdistrict are cow/goat manure, rice bran, husks, sawdust, EM4, and molasses. These organic materials are easily available in the Sukorambi District area, making it easier for farmers to obtain these materials.

Tabel 1. Evaluation of Factors Driving the Sustainability of the Healthy Rice Plantation Program in Sukorambi Subdistrict, Jember Regency, 2024 Year

Code	Driving Factors	NU	BF	ND	NBD	NK	NRK	NBK	TNB
D1	Decreased soil fertility	3,6	0,24	3,6	0,86	10,7	3,6	0,85	1,71
D2	Assistance by PPL	4	0,26	4	1,06	11,1	3,7	0,98	**2,04**
D3	High price of inorganic fertilizers	3,7	0,24	3,7	0,91	10,5	3,5	0,86	1,76
D4	Ease of making organic fertilizer	3,8	0,25	3,8	0,96	11,1	3,7	0,93	1,89
	TOTAL	15,1	1,00	15,1	3,79	43,4	14,5	3,65	7,4

Source: Primary Data Processed (2024)

Among the 4 driving factors, the highest TNB is assistance by PPL. The role of PPLs in the socialization of healthy plants in Sukorambi District, Jember Regency is very high, because the role of PPLs as communicators, motivators, facilitators and educators, this can be interpreted that PPLs have an important role in the socialization of healthy plants.

The role of the communicator in question is as a person who provides important information about important matters related to agriculture, can guide and communicate well with farmers so that information can be conveyed and applied. The role of PPL as a motivator to provide input, advice, and conduct reviews to farmers' land is very influential in farming activities. The role of PPL as a facilitator is intended to be a forum for farmers in conducting group development, facilitating farmers in carrying out activities in accordance with administrative and providing access to information as a non-material facility. PPL's role as an educator is aimed at increasing farmers' knowledge in developing their farms, non-formal education through PPL by holding discussion forums and training can provide insight or understanding for each farmer group member.

Barriers Affecting the Sustainability of the Healthy Rice Plantation Program

Based on the Forum Group Discussion (FGD) with healthy rice farmers during the anjangsana event in Sukorambi sub-district, 4 driving factors were obtained, namely,

No Selling Price Support (H1)

So far, farmers in Sukorambi Subdistrict make their own organic fertilizer and for their own use, in other words, to meet the needs of their respective fields. Healthy rice and conventional rice are still not differentiated in price, which can cause healthy rice farmers to be less eager to cultivate healthy rice sustainability. Farmers also need permission to market their fertilizer. Therefore, this is an obstacle for farmers in Sukorambi District to get a selling price.

Lack of Government Support (H2)

The government has not provided much support for healthy rice such as no promotion to the community about rice from healthy rice plants and also has not provided a marketing place for agricultural products that use organic fertilizers. Therefore, there needs to be stronger government policy support so that the healthy rice program can become a priority program or at least a routine program that is not inserted into other programs.

Dependence on inorganic fertilizer/difficulty in changing behavior (H3)

Most farmers in Sukorambi Subdistrict think that if the leaves are not bright green, it is a sign that they are not healthy and results in a small harvest. In order for plants to look green, they need nitrogen nutrients in urea. So that the use of urea can exceed the recommended dose, this is what causes it to still be a reference for farmers in the use of inorganic fertilizers. It can be said that they still think that by using urea, plants can become healthy and increase yields. Whereas the excessive use of inorganic fertilizers will actually have a

negative impact on plants and especially the environment and can even inhibit plant growth and can also kill it because of the residue of chemicals that settle on plants to the soil (Fahrizal, 2019).

Length of time required to make organic fertilizer (H4)

The length of the fermentation process of organic fertilizer carried out by farmers in Sukorambi District is around 15 to 20 days, so that it can divert the use of organic fertilizer. Livestock manure, especially cow dung, has been used as plant fertilizer, but the usual use is not through the process of making organic fertilizer first, this will hinder (Sutrisno, 2019).

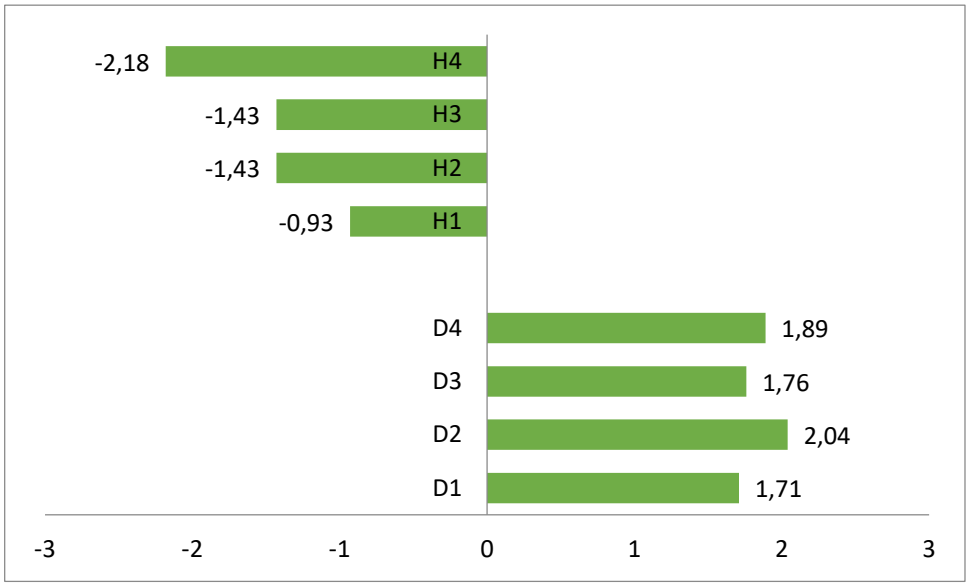
The solution to the time required to make organic fertilizer is by estimating the planting schedule, which means the estimated time required to make organic fertilizer until it is ready to apply before planting.

Table 6.7 Evaluation of Obstacles to the Sustainability of the Healthy Rice Crop Program in Sukorambi Sub-district, Jember Regency in 2024

Code	Inhibiting Factors	NU	BF	ND	NB D	NK	NR K	NB K	TN B
H1	No selling price support yet	2,15	0,18	2,15	0,40	8,75	2,92	0,54	0,93
H2	Lack of government support	2,85	0,24	2,85	0,70	8,95	2,98	0,73	1,43
H3	Dependence on inorganic fertiliz-ers/difficulty changing behavior	2,85	0,24	2,85	0,70	9,05	3,02	0,74	1,43
H4	Length of time required to make or-ganic fertilizer	3,8	0,33	3,8	1,24	8,70	2,90	0,94	**2,18**
	TOTAL	11,6	1,00	10,65	3,04	35,45	11,82	2,95	5,97

Source: Primary Data Processed (2024)

Among the 4 inhibiting factors, the highest TNB is the length of time needed to make organic fertilizer because it takes a long time of about 15 to 20 days for the fertilizer to be ready for use.



Driving and inhibiting factors of the Healthy Rice Plantation Program

After the FKK is known is to formulate an effective strategy and approach is a focus strategy, which is to minimize key inhibiting factors and maximize key driving factors to achieve goals. The selected FKK in the factors that encourage the healthy rice plant program is the assistance by PPL, so the focus is PPL can maintain as a communicator intended to provide important information about agriculture to farmer group members, PPL can maintain as a motivator intended to be able to provide encouragement to farmer group members

to be active in group activities, PPL can maintain as a facilitator intended to be a forum for farmers in conducting group development. Meanwhile, the FKK selected in the inhibiting factors is the length of time needed to make organic fertilizer. The solution to overcome this inhibiting factor is to make organic fertilizer by estimating the planting schedule, which means the estimated time needed to make organic fertilizer until it is ready to apply before planting.

CONCLUSION

Based on the formulation of the problem of research objectives and the results of research and discussion, it can be concluded that the role of PPL in the socialization of healthy plants in Sukorambi District, Jember Regency is very high, because the role of PPL as a communicator, motivator, facilitator and educator, this can be interpreted that PPL has an important role in the socialization of healthy plants.

REFERENCES

1. Donggulo, C. V, Lapanjang, I. M., & Made, U. (2017). GROWTH AND RESULTS OF PADI (Oryza sativa L) PLANTS UNDER VARIOUS LEGOWO PLANTING POLES AND PLANTING SPACING. Agroland Journal, 24(1), 27-35.
2. Sentana, S. (2010). Organic Fertilizers, Opportunities and Constraints. Proceedings of the National Seminar on Chemical Engineering "Kejuangan," 1-4.
3. Soekamto, M. H., & Fahrizal, A. (2019). Efforts to Increase Soil Fertility on Dry Land in Aimas Village, Aimas District, Sorong Regency. Abdimas: Papua Journal of Community Service, 1(2), 14-23. https://doi.org/10.33506/pjcs.v1i2.670
4. Sutrisno, E., & Priyambada, I. B. (2019). Making solid compost fertilizer of cow dung waste with fermentation method using starbio bioactivator in Ujung - ujung village, pabelan sub-district, Semarang district. Pasopati Journal, 1(2), 2-5.