

PAPER • OPEN ACCESS

Incentive program towards sustainability of organic rice certification in Limapuluh Kota Regency, West Sumatra, Indonesia

To cite this article: V I Mutiara *et al* 2021 *IOP Conf. Ser.: Earth Environ. Sci.* **741** 012077

View the [article online](#) for updates and enhancements.

Incentive program towards sustainability of organic rice certification in Limapuluh Kota Regency, West Sumatra, Indonesia

V I Mutiara¹, R Hariance¹, A S Utami¹

¹Department of Socio Economic, Faculty of Agriculture, Universitas Andalas
Limau Manis, Padang, 25163, West Sumatra, Indonesia

Email: mutiaravonny@agr.unand.ac.id

Abstract. The government of Indonesia has committed to support the development of organic agriculture in Indonesia by establishing regulations on Organic Agriculture Systems in 2013. West Sumatra is one of the provinces in Indonesia which is very committed to developing organic agriculture. Before the decree was established, The Department of Agriculture of West Sumatra has allocated on Regional Budget year 2011 to improve the Organic Food Product Incentive by giving an incentive for 250 IDR per kilogram of organic rice. It was expected that it can influence farmers' decision to recertify their organic products. Unfortunately, the incentive program was not continued in 2015. This research aimed to analyze the impact of government incentives on the sustainability of organic rice farming. The research was conducted in Limapuluh Kota Regency using survey methods. 65 organic rice farmers were interviewed. The research result showed that 80% of respondents agree that organic certification is a benefit for them. 20% of respondents do not think that organic certification is a benefit for their organic rice. As a result, they do not use the incentives for the benefit of organic rice production and organic recertification. 60% of them use it for household needs. Although the incentive program is not continued, 70% of farmers recertify their organic rice with the main reason is that it was the group's decision. It is suggested that farmer's motivation to re-certify organic rice should become a consideration by the government for the development of organic rice farming programs.

Keyword: *Certification, incentive program, organic rice*

I. Introduction

The term of sustainable agriculture has been promoted all over the world. It was stated in agenda 21 which was known as the Rio Declaration on Environment and Development that “every nation have to sustain their agricultural development policy on sustainable agriculture principle” [1]. One of the ways to reach sustainable agriculture is through organic farming [2]. Organic farming is a system of creating sustainable productivity [3]. From an Ecological perspective, organic farming can improve the quality of soil for the next planting seasons [4]. From an economic perspective, the cost of production is less because farmers do not have to buy chemical pesticides and fertilizers which are very costly [5]. In terms of productivity, it is found that organic farming can improve rice productivity in Indonesia [6].

West Sumatra is one of the provinces in Indonesia which is very committed to develop organic agriculture. West Sumatra Food Crop Agriculture Office through the 2011 Regional Budget provided incentives for 1,500 tons of organic agricultural products through an Organic Food Product Incentive



Content from this work may be used under the terms of the [Creative Commons Attribution 3.0 licence](https://creativecommons.org/licenses/by/3.0/). Any further distribution of this work must maintain attribution to the author(s) and the title of the work, journal citation and DOI.

and Disincentives System. The incentive is that farmers receive an IDR 250 per kilogram of organic rice production. Unfortunately, the incentive program was not continued in 2015. According to the organic certification body of West Sumatra [7], some farmer groups keep doing re-certifying their organic rice while other farmers groups do not continue re-certifying their product. Agricultural products that are certified organic will naturally be healthier than those that are not certified organic and have a potential market [8]. However, not all organic producers decided to label their products with organic certification due to several reasons [9]. Therefore, it is important to carry out this research which aims to analyze the incentive program towards the sustainability of organic rice certification.

2. Material and Methods

The study was conducted in Limapuluh Kota Regency of West Sumatra Province from September to November 2019. The research sites in the Limapuluh Kota Regency was chosen is because this district has a farmer group that matches the specified criteria. A survey method was used for this study. The population in this study was organic rice farmers in Limapuluh Kota Regency. The farmer groups were grouped into two. First, three farmer groups that have organic certificates in 2015 and had re-certify their organic rice in 2018. They are Kampung Duo Sakato, Sehati and Tigo Alua Saiyo. Second, two farmer groups that had organic certification in 2015 and their certification validation period expires in 2019 (Serba Usaha and Tuah Sakato Framer's groups) as shown in Table 1. Total of 65 organic rice farmers were interviewed. They were selected purposively from 5 farmer groups. This research was conducted using descriptive analysis. Descriptive analysis is the most basic analysis to describe the state of data in general.

Table 1. Organic Rice Certification status of Farmers Group in Limapuluh Kota Regency, West Sumatra

No	Name of Farmers Group	Years of Certification									
		2010	2011	2012	2013	2014	2015	2016	2017	2018	
1	Aie Malanteh Batu										
2	Simun I										
3	Kampung Duo Sakato (KDS)										
4	Sehati										
5	Tigo Alua Saiyo										
6	Serba Usaha										
7	Tuah Sakato										

Source: Organic certification body of West Sumatra, 2019

3. Result and Discussion

3.1 Research area

Limapuluh Kota Regency area is 3,354.30 Km² or 7.94% of the total area of West Sumatra Province. This regency is flanked by 4 districts (Agam; Tanah Datar; Sawahlunto /Sijunjung and Pasaman) and Riau province. Limapuluh Kota Regency has a tropical climate affected by monsoon winds with average rainfall ranging from 2200 mm to 3750 mm/year. Meanwhile, the average temperature ranges between 20°C - 25° C [10].

3.2 Respondents Profile

The percentage of respondents with the age range ≥ 40 to <50 years is 51.92% of the total number of respondents. This age is considered as a productive age for farmers. 38.46% of farmers are graduated from junior high school, almost 30% of farmers are graduated from high school and 3% of farmers are graduated from college. 94% of respondent's main job are paddy rice farmers, while 6% of them work

as traders, cattle ranchers, chicken breeders and tailor. 27% of respondents have experienced in paddy farming for more than 30 years. While the average year of experience on organic farming is about 5-10 years (Table 2).

Farmers have been cultivating organic rice farming system since 2005. Initially, farmers did organic rice farming because of the scarcity of chemical fertilizers in the research area. Farmers tried to solve the problem by using manure from local source to replace chemical fertilizers. This is supported by a large number of chicken farms in Limapuluh Kota Regency, which could also be a source of manure by farmers. Farmers got a lot of assistance from agricultural extension workers and the organic farming task force. At that time, farmers did not know much about organic farming. With support from local government, farmers were encouraged to get an organic rice certification for their product and since 2010, they got government incentives for an IDR 250 per kilogram of organic rice production.

Table 2. Respondents Profile in Lima Puluh Kota Regency, West Sumatra

Respondent Profile		Total Respondents	
		(people)	(%)
Sex	Male	8	12.31
	Female	57	87.69
Formal education	Elementary	19	29.23
	Junior High School	25	38.46
	High School	19	29.23
	Diploma	2	3.08
Primary job	Farmer	61	93.85
	Trader	4	6.15
Marital status	Married	65	100.0
Family member	1 - 3 people	29	44.62
	4 - 6 people	35	53.85
	7 - 10 people	1	1.54
Experiences on Organic rice farming	1 year	1	1.54
	1 - <5 years	14	21.54
	5 - <10 years	28	43.08
	10 - <15 years	21	32.31
	15 - <20 years	1	1.54
Land area	< 0.5 ha	47	72.31
	0.5 - < 1 ha	15	23.08
	1 - < 2 ha	3	4.62

Source : Field survey, 2019

It is not only the government of West Sumatra has given organic farming incentive to agricultural organic products in Indonesia, but also has been implemented in several provinces. One example is in the Province of Bali, the Jembrana Regency which conducts the development of organic agriculture and is regulated directly by the regent of Jembrana Regency. The incentives given to the organic farmers group in Jembrana Regency are in the form of agricultural production facilities and infrastructure assistance, organic fertilizer subsidy assistance, and the provision of facilities to access information and technology [11].

In terms of the impact of government incentives on the sustainability of organic rice farming, it is found that the incentive is not the only main reason for farmers to implement an organic farming

system. There are three main reasons for farmers do organic farming systems. First, it is because they think organic farming is good for health and environment. The organic culture that has long been practicing became a habit and farmers are becoming aware that it is more environmentally friendly and good for health. Second reason is that organic farming system has economic benefits. 80% of respondents stated that their organic rice sales are increasing with the certification. They also sell the organic rice higher than conventional rice. However, some farmers feel that this organic certification has no economic benefit at all. Nearly 20% of the respondents considered organic rice certification to be of no benefit to farmers. Third reason for farmers to do organic rice farming is because of there is an incentive program from government. In Thailand, although there is incentive from their government, it is still questionable whether farmers will continue to practice organic farmers when the program ends [12].

One farmer group, Sehati, already had a market and loyal consumers for their products. This group can sell their organic rice not only in Limapuluh Kota Regency and other regency in West Sumatra, but also to Riau Province. This was supported by the success of the group in breeding cows from the government to reach 72 cattle which produced tons of manure every month. The manure is not only used by member of farmer group but also sold to other farmer groups. This has become additional farmers' income. Thus the members of the Sehati farmer group persist in carrying out the organic rice farming system even though there is no incentive from the government anymore. Despite of economic benefit, there is an intangible benefit gained from organic rice certification. Farmers stated that they have their pride if they got the organic certification. Farmers feel the existence of their organic agriculture has been recognized by government and consumers.

Farmers in Limapuluh Kota Regency started organic certification in 2010. The number of farmers groups that received organic certification increased in 2015. In the process of registering for organic rice certification, there were several obstacles for farmers. The first obstacle is in the process of recording organic rice cultivation activities. 48% of respondents claimed to experience complicated process of recording daily organic rice farming activities during planting period. The second obstacle is the process of submitting document for organic certification. The documents should be submitted to the organic certification body of West Sumatra in Padang City. When the documents need to be revised and completed, then farmers need to pick up the documents to Padang and revise it and then return it back for verification. This process often cause farmers to become unenthusiastic because it costs time, energy and money for transportation. Despite those obstacles, nearly 80% of respondents in Limapuluh Kota Regency re-certify their organic rice certification because of group's decision and farmer's willingness. Only 20% of respondents do not want to re-certify due to no economic benefit and the difficulty of certification procedures. In general, organic farmers are found to continue to carry out organic farming activities even though there is no incentive program.

It was expected that there would be an increase in the area of organic agriculture and the number of farmer groups that have organic certificate. The incentive itself is an award in the form of money given by the government to farmers so that they work with high motivation to implement organic farming system. Incentives in agriculture are not only in the form of money. Other forms of incentives can be in the form of subsidies for organic certification costs and prices to organic farmer groups and facilitates access to guarantees/certifications for organic farmer groups

4. Conclusion

Organic rice farming in Lima Puluh Kota Regency began in 2005 and the organic certification began in 2010. Government incentives have limited impact on the sustainability of organic rice farming. The incentive was not the main reason for farmers to implement organic rice farming system and to re-certify organic certification. 80% of farmers re-certify their organic rice with the main reason because of farmer's willingness which they aware of the health benefit and environment. Therefore, it is important for the government to support organic rice farming development programs not only focus on giving cash money as an incentive to motivate farmers to re-certify their organic certification.

5. Acknowledgement

The authors would like to acknowledge the Faculty of Agriculture, Universitas Andalas for funding this study from DIPA sources fiscal year 2019. Our deepest gratitude goes to our respondents who willingly shared their experiences during the discussion.

References

- [1] United Nations. 1992. Earth Summit Agenda 21 The United Nations Programme of Action from Rio *Rio Declaration on Environment and Development 1992*
- [2] Conway, G.R., and Barbier, E. B .1990. After the green revolution sustainable agriculture for development Earthscan publication London UK
- [3] IFOAM International Federation of Organic Agriculture Movements. 2002. Basic standards for organic production and processing.
- [4] Pacini, C., Wossink, A., Giesen, G., Vazzana, C., and Huirne, R. 2003. Evaluation of sustainability of organic, integrated, and conventional farming systems: A farm and field-scale analysis *Agriculture, Ecosystems and Environment* **95** 273-288
- [5] Pimentel, D., Hepperly, P., Hanson, J., Douds, D., and Seidel, R. 2005. Environmental, energetic and economic comparisons of organic and conventional farming systems *BioScience* **55-7** 573-582
- [6] Irawan, H., Wibowo,, Husnain, and Rochayati, S. 2012. Success story of organic farming in Indonesia, Paper presented at the workshop on Asian Network for Sustainable Organic Farming Technology, Korea, 2012,
- [7] Organic certification body of West Sumatra Province of Indonesia. 2019. Annual report 2018
- [8] Mutiara, V. I., dan Arai, S. 2016. The challenges in organic agricultural products in Southeast Asia *J. of Reviews in Agricultural Science* **5** 36-44
- [9] Veldstra, Michael, D., Corinne, E., Alexander, Maria, I., Marshall. 2014. To certify or not to certify? Separating organic production and certification decisions *Food PolicyI. Elsevier.* **49** 429–436
- [10] Statistical Bureau Limapuluh Kota Regency of West Sumatra
- [11] Jembrana Regency Regional Regulation No. 9/2010 concerning the development of organic agriculture in Jembrana Regency
- [12] Herique, O., and Faysse, N. 2020. A large scale public programme to promote organic rice farming in Thailand: building solid foundation to enable farmers to engage? *Organic Agriculture* June 2020