## RECOMMENDATIONS TOWARDS SUSTAINABLE FARMING METHOD FOR AN ORGANIC VEGETABLE PRODUCTION IN BUKIDNON, PHILIPPINES

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Abstract There are various methods or practices for sustainable farming. This study recommends farming methods that are appropriate and effective for organic vegetable production in Bukidnon and, in some way, serve as the basis for sustainable farming. Thus, this paper aims to recommend a sustainable farming method for organic vegetable production. Results of the study revealed that the organic focal person-key informants would highly recommend farming practices such as crop rotation, and intercropping for crop planning and management, composting, green manures and animal manure for nutrient management, pest and disease management, weed management, soil cultivation and tillage, plant propagation such as traditional varieties and seed conservation, and diversified farming system. As reported, there are no specific local markets for organic products in Bukidnon, as well as international markets. Among the issues and concerns raised by the key informants, organic certification is the topmost issue. This issue set a little drawback and discouraged some farmers from going organic. Recently, the senate in the Philippines finally approved the amendment of RA 10068, a bill recognizing the Participatory Guarantee System (PGS). They can now certify organic producers, compared to before when only third-party certifying bodies could certify and label organic products.

Keywords: Farming methods, organic vegetable production, recommendation, sustainable farming

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#### INTRODUCTION

Organic vegetables can be grown in a wide range of organic farm systems. While it is generally recognized that each organic farm is, in many senses, unique. It is also possible to classify various broad types of farming systems in which organic vegetables are likely to be produced (Davies, 2016). The Philippine government and private sector, which are involved in the organic value chain, aggressively attempted to promote organic vegetable production throughout the country. However, a major challenge to organic program implementation in the country is data and information gaps on organic vegetable production

and marketing, which constrain national and local planners, practitioners, and stakeholders from aggressively pushing for more initiatives to support the organic agriculture industry (Villegas et al., 2014).

Generally, the organic vegetable growers in the Philippines are smallholder farmers organized through associations and cooperatives. Some of these organic farmers received assistance from national government agencies and NGOs. Moreover, these organic vegetable growers relied on their indigenous knowledge acquired from years of experience in vegetable farming, infusing additional knowledge and skills learned from training and

seminars on using organic inputs and technologies (Villegas & Custodio, 2014).

Bukidnon going organic to sustain its agriculture resources was among the key insights shared by leaders from different stakeholders in their "Bukidnon 2018: Public Outlook" series. However, in Bukidnon, the area so far for organic farms is less than 1 percent of its 349,905 hectares of land used for agriculture. Although, the province passed an organic agriculture code in 2011 patterned after RA 10068 and set an annual allocation of a P5 million budget for organic agriculture (Balance, 2018).

The idea of sustainable farming entails farming methods, or production management, which allows for the efficient use of natural resources in order to achieve financial profit while respecting the laws of nature and meeting the expectations of society at the same time. The idea is interdisciplinary and incorporates many facets (Prus, 2017). Sustainable farming is important because it offers a solution to the problems caused by the way most of our food is grown today. Today's industrial farming methods deplete our natural resources through monoculture and the overuse of pesticides and fertilizers (Kim, 2021).

SDG 2 seeks a sustainable solution to end hunger in all its forms by 2030 and to achieve food security. The aim is to ensure that everyone in the world has enough good-quality food to lead a healthy life. Achieving SDG 2 will require better access to food and the widespread promotion of sustainable agriculture. This entails improving the productivity and incomes of farmers, especially small-scale farmers, by promoting equal access to land, technology, and markets, sustainable production systems, and resilient agricultural practices (UN, n.d.).

There are various methods or practices for sustainable farming. However, this study has to recommend farming methods that are appropriate and effective for organic vegetable production in Bukidnon and, in some way, would serve as the basis for sustainable farming.

Therefore, this study sought to answer this main objective: To recommend a sustainable farming method for organic vegetable production.

The objective was realized through key informant interviews with the organic focal person of DA-RFO 10, DA-PAO, and DA-LGU.

### RESEARCH METHODS

#### Research Design

The study used specific methods and designs to get a significant result. Descriptive research was applied as the research design. The descriptive research method primarily focuses on describing the nature of a demographic segment without focusing on why a particular phenomenon occurs. Rillo and Alieto (2018) defined descriptive research as a purposive process of gathering, analyzing, classifying, and tabulating data about prevailing conditions, practices, processes, trends, and cause-effect relationships and then making an adequate and accurate interpretation of such data with or without or sometimes minimal aid of statistical methods. Nassaji (2015) also stated that descriptive research aims to draw and classify a phenomenon. This study used a descriptive method to describe the recommended sustainable farming method for organic vegetable production.

#### Subjects of the Study

This study was interviewed to elicit the necessary data and information for this research article. The subjects of the study were the appointed regional, provincial, and municipal organic focal persons. These key informants/participants were selected to engage in the process of developing a recommendation for a sustainable farming method. The researcher believed that these participants were knowledgeable about the current situation of organic vegetable production in Bukidnon.

#### **Sampling Method**

The purposive sampling method was used to choose the key informants for the interview.

#### **Data Gathering Procedure**

The researcher conducted an interview with the organic focal person of DA-RFO 10, DA-PAO Bukidnon, and DA-MAO of Lantapan, Malaybalay, and Manolo Fortich, in order to know the status of organic vegetable production in Bukidnon. The purpose of the interview is to generate baseline data and information through an assessment of the performance of organic vegetable production in Bukidnon in terms of economic, environmental, and social aspects as a basis for possible recommendations for sustainable farming methods. Prior to the conduct of the interview, the researcher wrote a formal letter to the key informants. With the approved letter, the researcher went to the informants' respective offices and conducted the interview. The researcher also provided an Institutional Ethics Review Committee (IERC) FORM 13. This form consists of an information sheet that allows participants to understand the nature of the study fully and a certificate of consent, which certifies that the participants have voluntarily and willingly participated in the interview.

## RESULTS AND DISCUSSION

### **Background of Organic Farms In Bukidnon**

The Department of Agriculture Regional Field Office 10 (DA-RFO 10) continues to push for the adoption and support of organic agriculture (OA).

Proclamation No. 1030 declares the observance of National OA Month every November in support of Republic Act 10068, otherwise known as the OA Act of 2010, and the National OA Program (NOAP) to mainstream OA practices throughout the country. The NOAP has firmly promoted OA to contribute to overall agricultural growth and development in terms of sustainability, competitiveness, and food safety. The DA targets to have at least five percent of the nation's total agricultural area practice organic farming. Based on the previous year's record, our country has more than 52,500 hectares of organic area, attributing 656.17 hectares of these to Bukidnon out of 12, 786.67 hectares of organic farms in Region 10.

In Bukidnon, the area for organic farming is less than 1 percent of its 349,905 lands used for agriculture (DA-PAO; Balane, 2018). The province of Bukidnon passed an organic agriculture code in 2011 patterned after RA 10068 with the aim to protect and advance the right of small and disadvantaged farmers to food security, sustainable livelihood, and social equity in accord with the rhythm and harmony of nature. The said code set an annual allocation of five million pesos. In addition, the Department of Agriculture (DA) in Northern Mindanao planned to spend over 300 million pesos to empower farmers in Bukidnon and be able to link them directly to buyers in Manila. The Municipalities of Impasug-ong, Malaybalay, Talakag, Sumilao, and Lantapan, or the IMMATASULA complex, where the high-value vegetable production is abundant, will be prioritized.

Table 1 shows the summary of the inventory of organic stakeholders in Bukidnon as of 2017. Based on the information provided by the provincial organic focal person, there are a total of 338.518 hectares of organic farms in Bukidnon as of December 2017. However, as of 2021, DA-RFO 10 has already recorded a total of 656.17 hectares of organic area in Bukidnon (cagayandeoro.da.gov.ph/).

Table 1 Inventory of organic stakeholders in Bukidnon as of December 2017

Farm	Crop	Year	Area of
Location/Addres	Produced	Starte	Productio
S		d	n (ha)
San Fernado	Banana,	2009	16
	corn, adlai		
Libona	Papaya,		5.395
	Vegetables		
	,		
	Vermicast		
Sumilao	Vermicast		1
Valencia	Rice,	2002	164.2
	vermicast,		
	vegetables,		
	banana,		

	foliar		
	fertilizer		
Malaybalay	Rice,	2008	84.62
	vermicast,		
	vegetables,		
	banana,		
	herbs,		
	duck, goat		
Manolo Fortich	Vegetables		10.85
	, vermicast		
Malitbog	Peanut,		8.75
	banana,		
	vegetables,		
	coffee,		
	herbs		
Lantapan	Vegetables	2008	22
	, banana,		
	vermicast		
Don Carlos	Vermicast,		0.028
	fruit trees		
Impasug-ong	Vegetables	2010	3.8
Kibawe	Vermicast	2010	1
Kalilangan	Coffee,		6.25
	Vegetables		
	, upland		
	rice,		
	banana,		
	cacao, fruit		
	trees		
Talakag	Rice		12.675
Damulog	Trees,		1.7
	corn,		
	vegetables		
Baungon	Vermicast		0.25
Total			338.518
	1		

Source: Department of Agriculture Provincial Agriculture Office (DA-PAO)

As to the data and information on the volume of organic vegetable production in Bukidnon, the province, municipal, and even the region's organic focal person acknowledges the need for more databases on organic vegetable production. Accordingly, no official record they provided could account for the total volume of organic vegetable production. However, as reported by the Regional Executive Director of DA-RFO 10, as of 2021, the total volume of organic production for region 10 is listed at 5,166.37 metric tons (cagayandeoro.da.gov.ph/). This figure includes all the organic commodities.

#### **Organic Crop Production**

The key informants were asked about what needs to be considered before engaging in organic crop production. They enumerated possible considerations farmers should ponder before converting to organic farming, particularly in vegetable production.

- 1. On-farm benchmarking the first step to consider is to visit organic farms and see how they do it. Converse with organic farmers and growers on how to start organic farming. According to the organic focal person of DA-Lantapan, there are several organic learning sites in Bukidnon that farmers can visit. These learning sites are accredited with DA-ATI, and supported by TESDA for their organic agriculture short course. Benchmarking in organic farming involves gathering data about the performance of farms. With this, meaningful insights can be gained. It can possibly answer queries about production, management practices, and other factors that can affect productivity, cost of production, and profitability in organic farming. In short, benchmarking gives farmers an idea about the success of the organic farming business.
- 2. Farmers' willingness to shift to organic farm production - the key informants strongly agreed that a farmer's willingness to shift to organic farming is a very important consideration. A farmer's commitment and passion in adjusting to a different farming system requires a painstaking decision since organic farming requires a lot of time, effort, and financial capital to achieve a successful crop yield without the help of pesticides, herbicides, and other products from agrochemical companies. According to Organic Research Center (n.d.), going organic requires a lot of consideration and commitment. Bouttes et al. (2018) disclosed in their study that a farmer's decision to convert to organic farming was driven by their expectation that it would enhance their adaptive capacity. On the other hand, results revealed in the study by Yu et al. (2014) stated that farmers are willing to convert to organic agriculture if their revenues would increase. The informants, as well as the organic vegetable growerrespondents in Bukidnon, agreed that transitioning to organic farming takes time and patience, depending on the production/cultural practices used in organic farming methods. It can take three to five years to convert to an organic system. This argument is supported by the claim of Martin (2010) that the land must be managed as organic for 36 months or three years. Meanwhile, Zimmer and Durand (2016) also reported that one of the deterrents to going organic is the 36- month- long process of transition, during which time you can only use organicapproved inputs and practices. As mentioned, crop yields may decline during the initial transition period until a balance in the system is reached, but with time, yields will rebound. With this initial result in the transition phase, some farmers felt disheartened, especially those who have shifted to organic farming for the sole reason of improving their profit. They would often fail because they do not consider the huge range of economic, social, and production changes that takes place during the conversion period. According to Sustainable

- Agriculture Research and Education (2003), the transition period can be stressful because of the need to develop and implement new management skills. In fact, farmers should be prepared to survive a short-term financial loss if yields drop and costs of production increase during this period.
- 3. Make a plan the key informants agreed that farmers who will venture into organic farming should have an "organic plan". The plan should outline the details of transition, production, preparation, handling, and management practices. In addition, the plan should outline all aspects of the farm operation, which include crop rotation, tillage plans, control of pests and diseases, and equipment and facility needs. Accordingly, the plan on how the organic crop will be marketed, priced, and promoted should also be included.
- 4. Land/area for organic production when the decision to transition to organic farming is made, the next step would be to prepare the land area for organic production. The DA organic focal person said that organic farming does not require vast land. A small percentage of the farm during the first year of the transition would do. For organic vegetable crop production, it may be logical to start on the part of the hectare of land and gradually increase to the whole farm. The land area for organic production should have good and fertile soil.
- 5. Farm inputs (seed, nutrients, and pest management) farm inputs are one of the most important considerations for organic farming. For transitioning farms, the DA provides farm inputs to start organic farming. The organic focal person of DA-PAO had mentioned that the province allocated a five million budget every year as support for organic agriculture. They provide farm inputs such as seeds, farms, manures, and organic foliar fertilizer. They also provide training and seminars on how to make organic fertilizer. Moreover, the DA-PAO advised farmers to write a letter of intent if they want to avail of programs and projects relative to organic agriculture.
- 6. Organic certification organic certification is also a very important consideration for venturing into organic farming. It is a plus factor in the market if the crop grown is organic certified. However, only a few of the organic farms in Bukidnon are organiccertified (see Table 2). As described by the organic focal person, farmers find the cost of third-party certification to be exorbitant. The certification cost would range from PhP 42,000 to PhP 150,000 per crop, which is valid for one year. This amount is way beyond the purse of small farmers, especially those who have just started transitioning to organic farming. This concern coincides with the study of Piadozo et al. (2016), which affirmed that smallscale farmers could not afford to have their farms certified by a third party due to their small volume of production and low farm price received. This is

also not viable for farmers who are only in the transition stage and have low yields. Nevertheless, applying for organic certification is not easy. They were getting certified and involved in too much work.

7. Financial aspect - one of the most important concerns for farmers is the financial aspect of the transition to organic production. Everyone has agreed that this is a major issue that needs to be understood before the transition begins. Determining income needs and expectations during the transition and in the long term is crucial.

## Sustainable Farming Method for Organic Vegetable Production

The key informants were asked to recommend sustainable farming methods used for organic vegetable production. They were provided with a list of recommended production/cultural practices for organic agriculture adopted from the training manual for organic agriculture of technologies and practices for smallholder farmers (TECA) as the basis for their responses. Participants were asked to decide which of the organic farming practices would highly provided thev recommend. recommend, and not recommend to farmers. In this connection, results revealed that the organic focal person highly recommends the following practices: i) crop planning and management, particularly crop rotation and intercropping; ii) nutrient management, particularly composting, green manures, and animal manure; iii) pest and disease management; iv) weed management — manual weeding in particular; v) soil cultivation and tillage; vi) plant propagation such as the importance of traditional varieties and seed conservation, and vii) diversified farming system. Moreover, this implies that the key informants-organic focal person agreed to the recommended organic practices by TECA.

Table 2 Recommended farming practices for organic vegetable production

	· r				
Particulars	HR	R	U	NR	Total
					number
					of key
					informants
Mulching	5	-	-	-	5
Water Management	5	-	-	-	5
Crop Planning and					
Management					
a. Crop rotation	5	-	-	-	5
b. Intercropping	5	-	-	-	5
c. Cover crops	2	3	-	-	5
d. Crop-animal	1	4	-	-	5
association					
Nutrient Management					
a. Composting	5	-	-	-	5
b. Green manures	5	-	-	-	5
c. Animal manure	5	-	-	-	5
d. Microbial fertilizers	1	4	-	-	5
e. Mineral fertilizers	1	4	-	-	5
Pest and Disease	5	-	-	-	5
Management					

Weed Management					
a. Manual weeding	5	-	-	-	5
b. Biological control	5	2	1	-	5
of weeds					
c. Mechanical control	-	1	3	1	5
Soil Cultivation and	5	-	-	-	5
Tillage					
Plant Propagation					
a. Plant propagation	1	4	-	-	5
b. Importance of	5	-	-	-	5
traditional varieties					
c. Seed conservation	5	-	-	-	5
Animal Husbandry	2	3	-	-	5
Other (specify)					
Diversified farming	5	-	-	-	5
system					

Legend: HR-Highly Recommended, R-Recommended, U-Uncertain, NR-Not Recommended

#### **Markets for Organic Products**

There are no specific local markets for organic products in Bukidnon. However, there are organized trading centers by DA Regional and Provincial Office. One of the examples is the trading center/post for organic products located at the Provincial Agriculture Office in Bukidnon. This trading center showcases different organic products available in the province. Unfortunately, not all organic growers in Bukidnon participate in this kind of activity. This is only participated by active associations, such as the Malaybalay City Organic Farmers Association and Bukidnon Association of Diversified Farm Owners. At this time, the said trading center is operational, which opens every Monday, Thursday, and Friday.

Some of the key informants claimed that local markets for organic products are very difficult to establish in the province. This is one of the reasons why other farmers are hesitant to transition to organic farming. As observed, established organic farms in the province opted to display their products in their respective farms to get premium prices, in lieu of displaying them in supermarkets where the organic products sometimes mix up with their nonorganic counterpart and be labeled at the same price.

As to the international market for organic products, the key informants are not certain if these existed in the country. However, they claimed that there is an increasing demand for organic products internationally. This is disclosed by the report of the business research company on April 2022 that the global food market is expected to grow from \$227.19 billion in 2021 to \$259.06 billion in 2022.

### **Issues and Concerns in Organic Production**

There are many issues and concerns encountered by organic production in Bukidnon. The topmost issue is organic certification. It is said that getting certified costs a significant amount, and small farmers, who should be given support by the program, could not afford it. This set a little drawback and discouraged some farmers from going organic. This concern coincides with the study of

UNCTAD (2019), which disclosed that getting organic certification is administratively burdensome. It is costly, and there are only a few organic certifying bodies available. Nevertheless, this concern was addressed through RA 11511. The law finally recognized Participatory Guarantee Systems (PGS) as a credible and affordable way to certify organic produce (IFOAM, 2021).

Other issues and concerns such as inadequate support/subsidies for organic agriculture, stable market prices for organic products, organic agriculture not being a priority of DA as a banner program, constant conduct of trade fairs/exhibits for organic products, training and seminars for organic agriculture, availability of organic products in all trading centers or DA-LGU, and effective marketing and promotion of organic products in the country were also mentioned by the organic focal persons.

### **Organic Certifying Bodies**

The senate in the Philippines finally approved the amendment of RA 10068, a bill recognizing a Participatory Guarantee System (PGS), a locally focused quality assurance system. They certify producers based on the active participation of stakeholders and are built on a foundation of trust. social networks, and knowledge exchange. With its recognition by law, organic farmers will be able to get training and certification for their products without incurring high costs. Unlike before, only the products certified under third-party certification could be labeled as organic, which is under Section 17 of the OA Act of 2010. Certified organic farms in Bukidnon got their certification from the Organic Certification Center of the Philippines (OCCP), which is a third-party certifying body. Table 3 presents the list of farms that are certified organic or naturally grown organic.

Table 3 List of farms certified organic and naturally grown

Name of	Location	Crops	Area	Certified/
farm		planted	(has.)	naturally
		1	(,	grown
Alomah's     Place	Dahilayan, Manolo	Different lettuces,	1	3rd party certified
	Fortich	herbs, ornamental		
		s, pipino, fish tilapia		
2. Potters	Dahilayan,	Lettuces,	1	3rd party
Garden	Manolo	herbs,		certified
	Fortich	carrots,		
		pipino etc.		
<ol><li>Secret</li></ol>	Malaybalay	Herbs,	0.5	3rd party
Garden	City	lettuces,		certified
		chicken,		
		fish, soil conditioner,		
4.Binahon	Songco,	Different	6	Gap
Agro	Lantapan	kinds of		certified
Forestry		high-valued		
Farm		crops,		
		chicken,		
		soil		
		conditioner,		

		forest, and		
		fruit trees		
5. Jacques Garden	Songco, Lantapan	Different high-valued crops, coffee	2	Naturally grown
6. Garrucho's Farm	Tongan2, Valencia City	Herbs, vegetables	0.25	Naturally grown
7. Sto Nino Organic Rice Farmers Association	Sto. Nino Malaybalay City	Naturally grown rice, vegetables	15	Naturally grown
8. Umanika Farm	Malaybalay City	Vegetables, fruits, vermicast		Naturally grown
9. Hobbit haus/mkaet dc	Imbayao, Malaybalay City	Vegetables, coffee	0	Naturally grown
10. Malaybalay City Organic Farmers Association	Malaybalay City	Rice, vegetables, chicken, fruits, banana		Naturally grown
11. Candi Diversified Farm	Can-ayan, Malaybalay City	Cacao, vegetables, fruits, coffee, banana, vermicast	2	Naturally grown

Source: DA-PAO

# Government Support/Subsidies for Organic Farming

As reported, DA-RFO 10 provided support for organic farming. In fact, they provided farm machinery, vermicomposting facility, a trading center, and subsidies for organic certification. As of 2021, the agriculture department in Northern Mindanao (DA-10) convened with the organic agriculture (OA) focal persons and report officers from some of the local governments in Region 10 for the crafting of the 2022-2027 OA roadmap. The activity focused on the conduct of a workshop to lay down a blueprint for the priority programs, projects, and interventions to be implemented region-wide for the cited period towards the promotion and development of OA.

With the roadmap serving as the guide, the DA and its partners at the local levels eye for the attainment of the goal stipulated in RA 10068 or the OA Act of 2010, which is to have a thriving OA industry, contributing to better farm income, improved farmers and consumers' protection, enhanced soil fertility and farm biodiversity, and environmental protection.

Meanwhile, DA-PAO allocated a five million budget every year for OA programs. This budget will be awarded to the municipalities that wish to avail of the program and could comply with the provincial agriculture office's requirements.

## DA-Organic Focal Person main recommendations for a sustainable farming method-organic farming

Based on the result presented in Table 2, the following are the main recommendations given by the regional, provincial, and municipal Organic Focal Person for a sustainable farming method, particularly organic vegetable production:

Table 4 Assessment of the social, environmental, and economic results of organic vegetable

production

Area	Indicator	Result
Environme ntal	Farming Methods/Orga nic Vegetable Production Practices a. Soil Cultivation b. Animal Husbandry c. Natural Pesticides d. Biofertilizers e. Composting (vermicompost ing) f. Crop rotation g. Cover Cropping h. Diversified Cropping i. Mulching j. Seed Treatment	The study identified the farming method used in the production of organic vegetables. The identified production practices in Chapter 4 were highly recommended farming practices by the organic focal person in Chapter 5. The result implied a positive impact in achieving environmental sustainability through the practice of good organic production. In order to achieve high yields, organic practices need to be adapted. In this way, one of the key goals of organic agriculture would be achieved — soil fertility.
Socio- economic	Farmer's income	The profitability of organic farming is dependent on organic yields, the cost of organic production, and the organic price premium. All these factors can vary strongly between farming systems and years. In the case of organic vegetable production in Bukidnon, the study revealed that the

 	returns in all farm
	types are promising
	given a high price
	per kilogram, high
	net income, even
	better return to total
	operating expenses,
	and high return on
	investment. Beyond
	doubt, organic
	vegetable production increases farmer's
	income and is
	generally profitable.
Social capital	Organic farming can
	also provide benefits
	independent of the
	profitability of
	organic produce.
	Organic production
	can generate social
	capital and can be
	empowering to
	organic growers as
	they organize
	community
	organizations. As
	revealed in the result
	presented in Chapter
	4, organic vegetable
	growers are not just a
	member of
	community
	organizations, but
	some of them have
	led and created the
	organization. They
	provide training and
	extension services as
	identified learning
	sites by the DA-ATI.
	Moreover, organic
	farming can also
	provide the
	opportunity to use
	local resources and
	integrate traditional
	knowledge, as many
	elements of organic
	production practices
	are reminiscent of
	traditional farming
	methods, and most
	organic growers rely
	on their farming
	experience. Finally,
	rural areas may
	benefit from the
	creation of
<u> </u>	1

	employment in
	labor-intensive
	organic farming,
	especially in the
	transition phase.
Health benefits	Organic farming can
	provide considerable
	health benefits by
	reducing the
	pesticide exposure of
	its farm workers and
	rural communities.
	This study disclosed
	that all of the farm
	types applied
	homemade organic
	pesticides such as
	FFJ, FPJ, OHN, and
	calcium phosphate.
	The organic
	vegetable growers
	believed that the
	result and benefits of
	these homemade
	inputs is good to
	producers' and
	consumers' health.

As shown in Table 4, the social, economic, and environmental results of organic vegetable production in Bukidnon can be a basis for sustainable farming. To achieve environmental sustainability, recommended organic farming/production practices needs to be applied in order to achieve high yields. Organic production practices need to be adopted by farmers who wish to transition into organic farming. On the other hand, the economic sustainability of organic vegetable production depends on crop yield, price premium, and production cost. In order to enhance the social sustainability of organic vegetable production, concerned agencies should contribute to capacitate the establishment of organic growers' community organizations.

#### **CONCLUSION**

Department of Agriculture targets to have at least five percent of the nation's total agricultural area practice organic farming. This is why DA-RFO 10 continues to push for the adoption and support of organic agriculture (OA). As of 2018, the area for organic farming is less than 1 percent of its 349,905 land used for agriculture. However, the agency has no official record of the total volume of organic vegetable production in Bukidnon. Transitioning to organic farming is not an easy thing to do. It requires numerous considerations and a painstaking decision. The key informants strongly agreed that a farmer's

willingness to shift to organic farming is a very important consideration among others. The majority of the production/cultural practices adopted from the training manual for organic agriculture of technologies and practices for smallholder farmers (TECA) were highly recommended by the organic focal person-key informants. Allegedly, there are no specific local markets for organic products in Bukidnon, as well as international markets. Among the issues and concerns raised by the key informants, organic certification is the topmost issue. This issue set a little drawback and discouraged some farmers from going organic. Recently, the senate in the Philippines finally approved the amendment of RA 10068, a bill recognizing the Participatory Guarantee System (PGS). Organic producers can now be certified, unlike before, that only the thirdparty certifying bodies can certify and label organic products.

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