Status of Farmland Conversion to Organic Farming in Selected Municipalities in Lanao Del Norte, Philippines: Issues and Challenges

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ABSTRACT

Republic Act (RA) 10068 (as amended) is a legal guidepost to spearhead the implementation of organic agriculture in the Philippines. The law mandated that all agricultural systems promote a sustainable practice using the lens of ecologically sound, socially acceptable, economically viable, and technically feasible production of farm-to-table food. Studies show that program implementers are not gaining enough inroads in their efforts to promote farmland conversion to organic agriculture in the country. This study investigates the status of farm conversion of Lanao del Norte farmers to organic farming and the reasons behind their decision to adopt the system, the issues and concerns they face and recommendations for its successful implementation. This is a qualitative study which covers 12 out of 22 municipalities of Lanao del Norte. The primary sources of data were 36 organic farmers and 23 program implementers as key informants.

Results show the average land converted to organic agriculture (OA) in the covered municipalities is only 2.428 hectares, way below the 5% prescribed in the law based on the total agricultural land area per municipality. Among the 12 municipalities studied, only Kauswagan has a policy-integrated implementation of OA as a flagship program to combat poverty, food insecurity and armed conflict. In general, there are issues raised in the OA implementation like laborious production process, low productivity, confusing policy direction of the implementers, pest infestation, lack of farm input, and price support for marketing. Also, full OA implementation is hampered by climate change and synthetically contaminated water sources in the food basin of Lanao del Norte.

Keywords: Organic farming, farmland conversion to organic farming, sustainable agriculture, challenges of organic farming

INTRODUCTION

The Philippines is primarily an agricultural country with a large portion of Filipinos living in rural areas and supporting themselves through agricultural activities. Recent figures suggest that about a quarter of employed Filipinos work in the agricultural sector which is made up of four sub-sectors: farming, fisheries, livestock, and forestry. In 2020, the sector generated a gross value added (GVA) of about 1. 78 trillion Philippine pesos, equivalent to a 10.2 percent share of the country's gross domestic product (GDP). (https://www.statista.com/statistics/713240/philippines-number-of-agriculture-industry-employees/).

Republic Act 10068 known as the "Organic Agriculture (OA) Act of 2010" covers all agricultural systems that promote the ecologically sound, socially acceptable, economically viable, and technically feasible production of food and fibers. Organic refers to the particular farming and processing system, described in the standards and not in the classical chemical sense. Section 2 of the said law declares that the policy of the State shall be to promote, propagate, develop further and implement the practices of organic agriculture in the Philippines in order to enrich the fertility of the soil, increase farm productivity, reduce pollution and destruction of the environment and prevent the depletion of natural resources, further protect the health of farmers/consumers, and the general public, and save on the imported farm inputs. It dramatically reduces external inputs by refraining

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from the use of chemical fertilizers, pesticides and pharmaceuticals. (https://rfo3.da.gov.ph/organic-agriculture-program).

To make it more comprehensive, the amendment of RA 10068 through RA 115511 strengthens organic agriculture in the Philippines. The law provides for a more affordable system of organic certification, which will allow small farmers to benefit from producing organic products. The exorbitant certification cost in the past prevented small farmers from practicing organic farming and also makes organic products expensive for many Filipinos (Aldo & Rubrico, 2021). The law's ultimate aim is for food security, food accessibility, affordability and human health are among the aspirations for the Filipinos. (http://lawphil.net).

In Northern Mindanao, there are a number of communities which have already adopted organic farming or sustainable agriculture (Tagupa, 2011; Majorenos, 2005). This study would examine the current status of farmland conversion to organic farming in Lanao del Norte and the corresponding issues and challenges that this program is facing. In this province, there is a context-specific organic agriculture program that is now taking a strong foothold in Kauswagan, which is a good starting point to determine the ripple effects of the practice in other municipalities in the province. Aside from that, the strengthening of organic farming law in the Philippines deserves a careful investigation within the context of a historically war-torn province in Southern Philippines

Objectives of the Study

The study aims to determine the extent of implementation of OA in Lanao del Norte based on the mandates RA 10068 (as amended by RA 115511). Specifically, this systematic inquiry would like to obtain the following objectives:

1. To determine the implementation of OA in the municipalities in Lanao del Norte with respect to the following:

a. Farm Size Converted to OA

b. Implementation Strategies

c. Best Practices of OA: The Case of Kauswagan:

2. To describe the issues and challenges for the non-compliance of RA 10068 (as amended by RA11511).

3. To propose field-based recommendations that would strengthen the OA implementation.

METHODOLOGY

Research Design, Participants and Locale

This study is descriptive in nature and employed mainly qualitative design making use of multiple data collection methodologies. The research participants of this research were selected farmers engaged in organic or sustainable farming, and OA implementers whose functions/advocacies are related to organic farming. At least 5 informants per municipality were interviewed in the study. Municipality-based participants comprised of 2-3 farmer practitioners, personnel of the Department of Agriculture involved in supporting the practice of organic farming. The farmers being interviewed were recommended by the head of the Department of Agriculture (DA) in the 12 municipalities. Data were collected using in-depth interview guide. A total of 36 farmers and 23 implementers, for a total of 59 informants, were included in this study.

The research locale is Lanao del Norte comprising of 22 municipalities. The province borders Lanao del Sur to the southeast, Zamboanga del Sur to the west, Illana Bay to the southwest, Iligan Bay to the north, Misamis Oriental to the northeast, and is separated from Misamis Occidental by Panguil Bay to the northwest. According to the 2024 census, the province has a total population of 761,725 people (https://lanaodelnorte.gov.ph/)

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Due to safety and security issues, only 12 municipalities of this province were included namely; the coastal municipalities of Kauswagan, Maigo, Kolambugan, Bacolod, Linamon, and Tubod, Three (3) upland areas: Tagoloan, Sultan Naga Dimaporo and Salvador. The remaining areas are located in the central plains of Lanao del Norte where the extensive irrigation system serving rice farmers is available - Lala, Kapatagan, Sapad. The latter is the rice granary of Lanao del Norte since the bulk of provincial rice production is coming from these municipalities.

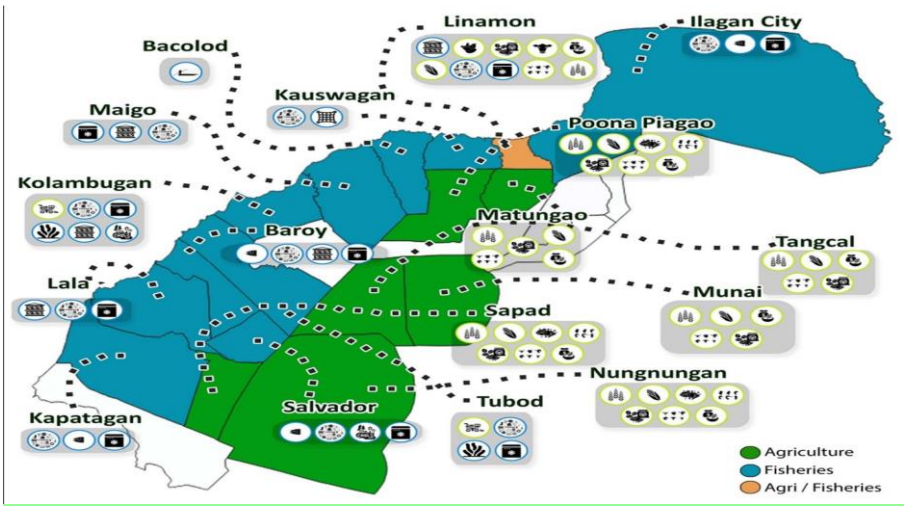

Figure 2. Agricultural Map of Lanao del Norte

Source: PDPFP, 2019-2024 (https://lanaodelnorte.gov.ph/)

RESULTS AND DISCUSSIONS

Demographic Profile of Informants

Among the farmers interviewed, three-fourths are males (66.67%) and the rest are females. They are highly educated with more than half of them (55.56%) obtaining either college level (25%) or even college graduates (30.56%). The farmers are generally older with a median age range of 51-55 years old. The majority of them (29 cases or 80.56%) are Bisaya-speaking people.

Moreover, the informants also are generally married (72.22%), with a little over half of them having 3-5 children (55.56%). Their main sources of income are farming (24 or 66.67%), employment (7 or 19.45%), and fishing (2 cases or 5.56%. More than a third of the farmer informants earned between 6,000-10,000 (13 cases) a month, followed by those getting 1,000-5,000 with 11 cases (30.56%). On the other hand, there are 11 (30,55%) informants whose income is more than 10,000 a month. On the average, a family of five members will need at least 13,797 pesos (roughly 249 U.S. dollars) per month to meet their minimum basic food and non-food needs in the first semester of 2023. Unfortunately, 67% of the informants earn 10,000 and below which fall far below the Philippine poverty standard.

Implementation of Organic Agriculture

OA Introduction, Duration of Practice and Land Conversion

The idea of farmland conversion to OA is an act of changing a farming system from traditional/conventional to organic. The period covered for the conversion process emanates from the start of organic training up to the stage of PGS certification of agricultural products. The period in between is called a transition where a farmer can get the right skills to convert the farm into a duly certified organic farm. But before going into the discussion on OA conversion, let us examine the time when OA was introduced and the duration of practicing the system.

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Areas With Limited OA Implementation

The data in Table 1 show that there are municipalities in which the implementation of OA is noticeably weak. Salvador, Sapad, Lala, and Bacolod are the municipalities where the practice of organic agriculture is very weak. Bacolod informants could not recall when the OA program was implemented. In terms of practice, there is an informant who is said to have practiced this technology for 3 years, and another one mentioned to have used mixed methods (using both synthetic and OA farming) in farming for 3 years also. Unfortunately, no data could be generated on the size of the area dedicated to OA in Bacolod.

In the case of Sapad, implementation of OA is a recent introduction which started in 2017. It could perhaps explain why not much data can be produced regarding the duration of the farmers' engagement and farm conversion to OA. Moreover, the municipality of Salvador also presents 3 periods of OA implementation. Based on the narrative, it was introduced to a farmer even before 2010 when this farming system became a law. The oldest period reckoned was in 2001. However, another mentioned that OA was introduced in 2014, and another one said that it was in 2023. Sad to say again, there is no mention of the size of the farm dedicated to OA.

Looking at Lala, an informant remembered its implementation in 2001. He even cultivated 3 hectares of land using organic farming. Another farmer informant also noted OA being implemented in 2023 and he has a farm which utilized both synthetic and organic farming for 2 years already.

Areas Which are Receptive to Organic Agriculture

The other 8 municipalities studied can be considered as doing some positive strides to implement OA. The best practice on OA is Kauswagan. Under the leadership of Mayor Romel Arnado, an ordinance was signed in 2012 declaring the whole Kauswagan as an Organic Agriculture town. This is his flagship program to address the root causes of conflict, poverty, hunger and inequalities in the area.

Knowledge about OA in **Linamon** started in 2003 as shared by one informant. Two others recalled its implementation years after the RA was declared, 2014 and 2018, respectively. The duration of their engagements in OA is the longest with a mean of 16.7 years, and the area converted to organic farming is 4.5250 hectares.

In **Kolambugan**, the introduction of OA was known by one informant way back 2009. However, there are 2 cases who said that their awareness of this technology was only in 2022. The mean duration in the practice of OA is 10.5 years. Interestingly, the area converted to OA is less than a hectare only (.535 sqm) despite the long duration in learning the technology.

The data from the coastal town of **Maigo** indicate that one informant had learned OA in 2000 and utilized 3 hectares of land for this purpose. Another one learned OA in 2003 and declared to have dedicated 2 hectares for this farming technology. Another informant also said to have learned OA in 2011 and is now cultivating his small farm using this method. The average duration of practicing OA in Maigo is 14 years and an average of 2 hectares is dedicated to this farming method.

The informants in **Kapatagan** have an average of 11 years in organic farming with 3.35 hectares converted to this method. However, knowledge of OA in this municipality was very early, 2002 and 2004, which is even before the OA law was signed in 2010.

As shared by an informant in **Sultan Naga Dimaporo (SND)**, he has been in organic farming practice for 20 years but is now maintaining a quarter of hectare for OA. However, another informant disclosed that he used a 2-hectare land for OA which he cultivated for a month. The average land converted to OA in SND is 1.1250 hectares.

Tagoloan is an upland municipality in Lanao del Norte. Information on OA came to an informant in 2007 but he disclosed to have practiced it just 3 years ago utilizing 12 hectares of land for this purpose. Another informant learned about OA in 2018 and utilized 4 hectares on this new method. Overall, mean years of practice relevant to OA is 4 years.

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Tubod municipality is the seat of provincial offices in Lanao del Norte. Based on the referrals, we located informants who practice OA. These informants are practicing OA on limited spaces, measuring about a fourth of a hectare. Knowledge on OA is also quite recent, specifically in 2018 (2 cases) and 2021. On the average, the farmer informants in Tubod have been into OA for almost 8 years (mean: 7.33 years) already.

Overall, the informants have been into OA for an average of 8.81 years or 9 years. The land converted to OA is also calculated at 2.428 ha. Areas converted to OA if classified into size would show the following percentage distribution:

*One hectare and less– **52%***

*More than 1 ha to 3 ha– **22%***

*More than 3 ha– **26 %***

Table 1. OA Introduction, Duration of OA Practice and Farm Size Converted

Municipality	**Year OA was Introduced**	**Years of Practicing Organic Farming**	**Size of Farm Converted to OA**
Bacolod		Mixed almost 3	---
		--	---
		5	
	Ave.		
Kapatagan	2002	12	.7 ha
	2004	10	6 ha
	Ave.	**11 years**	**3.35 ha**
Kauswagan	2010	14	800 sqm
	2018	5	1.2 ha
	2023	2	.5 ha
	Ave.	**7 years**	**.5933 ha**
Kolambogan	2009	20	70 sqm
	2022	1	500 sqm
	2022	Still starting	500 sqm
	Ave.	**10.5 years**	**.535 sqm**
Lala	2001		3 ha
	2020		
	2023	2	2 ha mixed

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	Ave.		
Linamon	2014	9	500 sqm
	2018	21	9ha
	2003	20	
	Ave.	**16.7 years years**	**4.5250 has**
Maigo	2000	Since farm land needs higher input	3 ha
	2003	20	2 ha
	2011	8	1 ha
	Ave.	**14 years years**	**2 ha**
Salvador	2001		3 ha
	2023		
	2014		
	Ave.		
Sapad	2017		
	2020		
	2019	1	600 sqm
	Ave.		
Sultan Naga Dimaporo	1996	20	2,500 sqm
		1 month	
	2015	weeks	2 ha
	Ave.	**10,7**	**1.1250 has**
Tagoloan	2007	3	12 ha
		5	
	2018	4	4 ha
	Ave.	**4 years**	**8 has**
Tubod	2018	5	2,500 sqm
	2018	9	

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	2021	8	2,500 sqm
	Ave.	**7.33 years**	**2,500 sqm**
GRAND MEAN		**8.81 years**	**2.428 ha**

Despite the limitations of the scope of the data contained in Table 1, there are trends that could be gleaned from the findings. Four (4) out of twelve (12) municipalities have very weak implementation of OA simply because this farming method seems to be unpopular to the farmers. On the other hand, the farmers of the eight (8) municipalities have shown their awareness and practice of OA since 2003. There are also more number of recorded farmed areas devoted to this purpose. The overall picture of OA practice in Lanao del Norte indicates that a little over half (52%) of farmers tilled smaller farm sizes of I hectare or less, and nearly half (48%) have more than a hectare of organic farms. The adoption of sustainable farming practices according to Dinis et al. (2013) could be accounted by farm size, land ownership and complementary activities attracting them to this alternative farming system.

Best Practices in Organic Farming: The Case of Kauswagan

The Municipality of Kauswagan, Lanao del Norte has a laudable practice of organic farming. In this area, OA was implemented as the centerpiece policy initiative to carry out the From Arms to Farms Program (FAFP)- an internationally acclaimed program intended to support the rebel returnees of the Moro National Liberation Front (MNLF) and the Moro Islamic Liberation Front (MILF). FAFP is implemented as a component of the Sustainable Integrated Kauswagan Area Development and Peace Agenda (SIKAD-PA) which was launched in 2011). FAFP's goal is to promote community-based sustainable agriculture to address insurgency, poverty and hunger.

In order to support the organic agriculture policy, the Local Government Unit (LGU) constructed a trading post with assigned staff for the marketing of farmers organic products, buy the products of farmers directly in their farms with the Department of Agriculture's (DA) own vehicle to transport goods. To ensure that the OA practice really reaches the grassroots, some personnel in the DA are assigned per two barangays so that any problems encountered by farmers can easily be solved. Municipal ordinance was also implemented to ban the use and sale of synthetic products in farming activities and in trading. At the household level, all houses are required to have backyard gardens that utilize organic inputs as requirement to obtain barangay/municipal clearance. As an outcome, Kauswagan is the only Certified Organic Municipality in Lanao del Norte and the poverty incidence had dropped significantly after 4 years. Rebel leaders also become spokespersons of successful adoption of organic agriculture.

Issues on OA Implementation

Organic Agriculture is seen as the viable and sustainable agriculture practice that is beneficial for environmental health, food safety, and economic opportunities. However, there are issues and concerns with reference to its implementation with are outlined below:

Economic Issues: Organic practices are effective in small scale production like backyard gardening, communal gardening or urban gardening and not viable in bigger agricultural lands. Farmers are hesitant to apply OA due to expensive and laborious process in making organic fertilizers and insecticides. At the start of the practice, low yield is expected therefore the already indebted farmers would have less income and could not repay their debts. The tenants are afraid that if they have low yields they would also be evicted from the lands they have been tilling for years. Farmer's hesitation to take risk in adopting OA has been noted by Nelson et al. (2011) in their study on Farmers in the Philippines: Characteristics, Knowledge, Attitudes and Practices They pointed out that although organic farming is a viable alternative to sustainable agriculture, yield variations become a cause of concern. Low yield in the early years of adoption is expected because full soil regeneration takes time to be achieved. Aside from it, the arduous preparation of organic inputs specifically fertilizer and pesticides demands time and patience which is entirely different from the use of handy synthetic products..

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Policy Issues: The government through DA is not very strict in their implementation of OA. In fact, DA distributed to the farmers in the central plains specifically Maranding or Sapad synthetic fertilizers for free, P5,000 cash, mechanized facilities for farming pursuant to the provisions of the Rice Certification Law. So the farmers in these areas are more into the use of synthetic fertilizers since OA is not a priority program for everyone to comply.

Environmental Aspect: Upland water sources contaminated by synthetic farm input is not appropriate for OA. Water filtration mechanism intended to eliminate synthetic pesticide and fertilizers is costly for farmers to afford. This makes most of them farming in the central plains of the province to use mixed fertilization, a combination of synthetic and organic fertilization technique. On the other hand, climate change makes it difficult for farmers to plant crops especially during long drought. if an El Nino persists for a longer time, the family would surely suffer from famine. The strict requirement of OA to use non-contaminated water for OA purpose already becomes a challenge to farmers. Also, climate change makes the vulnerable farmers struggle with sufficient productivity resulting to hunger as identified by Abraham & Pingale (2020).

Aside from issues pointed out earlier, there are other factors that could hasten of derail the practice of OA. For instance, Rodriguez et .al (2009) state that despite having support from technical assistance providers, farmers are rarely adopting Sustainable Agriculture Practices (SAP). Change agents are not prepared to attend to farmers' needs regarding sustainable agriculture practices. Government support programs often fail to encourage adoption due to lack of funding, inappropriate design and ineffective incentives. Aside from the technological and attitudinal impediments, social barriers, land tenure, infrastructure and incompatibility are other significant barriers to adoption.

RECOMMENDATIONS ON OA IMPLEMENTATION

Strengthening the implementation of RA 10068 (as amended By RA 11511) requires a comprehensive approach. To recapitulate the common statements given by farmers and implementers in our study, it involves policy, education, infrastructure, support networks, partnership and collaboration, monitoring and evaluation and further researches:

Here are some field-based recommendations stated in the following manner:

Funding and Policy Support

- Commitment of the LGU to prioritize Organic agriculture for funding support and implementation. There is a need for supportive policies and government initiatives.
- Strengthen regulations to implement organic agriculture and adherence to organic standards to facilitate export opportunities in the future.
- Give incentives, subsidies and grants to farmers transitioning to organic farming
- Availability and affordability of organic fertilizers, biopesticides, and organic seeds in the market at a lower price subsidized by the government. This helps farmer's ability to adopt organic methods fully farmers particularly for those farmers who may have limited resources

Education and Training

- Launch campaigns to educate farmers about organic practices, soil health management and pest control methods without synthetic chemicals
- Awareness and understanding of consumers about the benefits of organic products and promotion of local organic brands
- Continuously conduct trainings on organic farming techniques applicable in large scale production and sustainable practices in pest management and control

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Monitoring and Evaluation

- The implementers must regularly assess the impact of organic agriculture policies and programs to identify strengths, weaknesses and areas for improvement
- LGU's must establish mechanisms for the personnel and farmers to provide feedback on policy effectiveness and implementation challenges on OA

Certification

- There is a need for our government to encourage farmers to form cooperatives or associations to share the cost of certification and reduce individual costs.
- Advocate for government subsidies or grants specifically for organic certification fees
- Certification of organic products is very necessary to compete with the global industry. Acquiring a Certification from the Organic Certifying Body is very expensive and our farmers cannot afford it.

The aforementioned recommendations highlighted concerns which could hasten OA implementation and practice which have positive consequences to farmers and peoples' health, wellbeing and environmental protection. The great bottleneck in cascading the law's implementation at the municipal level lies in the funding of OA as . Each municipality has targets and priorities by agency like DA which confronts budget limitations. This in turn prevents DA to fund for the recruitment of staff and provide campaigns and attractive incentives to farmers who are willing to adopt OA.

CONCLUSIONS

OA as implemented in the 12 municipalities of Lanao del Norte has fared way below the mandated 5% land converted to organic farming. Despite the efforts of the Department of Agriculture to identify and select farmers to join in the program, OA in its present state has to go a long way given the process of learning the program, farmers' immersion, adoption, up to the stage of farm PGS certification. Findings indicate that only a handful of farmers in Kauswagan were able to receive the PGS certification which is a seal of compliance to OA standards. What made it possible was the close link between DA and LGU Kauswagan which was the key to this successful OA journey. This strong connectivity, in one way or another, is not visible in other municipalities studied. The vision and the goal to make OA work could be depicted in how implementers walk side-by-side with local government administrators despite the various institutional or financial constraints.

The practice of OA appears to be easily applicable in smaller areas than in large-scale farm application because of the needed farm inputs requiring more investment/funding. The preparation of farm inputs if applied in bigger farms are too laborious for a farmer who is used to using synthetic farm input to maximize productivity.

There seems to be a confusing agricultural policy from the DA that counters the tide of OA implementation. On one hand OA is popularized, but on the other hand, the same agency distributes synthetic fertilizers to farmers. Farmers readily accept the most handy farm input than to engage in the laborious process of OA in farm production..

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