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Research article

Role of Women in Organic Rice Production in Lanao del Norte, Mindanao, Philippines

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Abstract

This paper described the importance of organic rice farming and the role of women in its production within the municipalities of Lanao del Norte. Survey questionnaire and available secondary data were used in the study. A SWOT analysis was used relevant to this study. Organic rice production has been adopted in the province as part of the province-wide implementation of Organic Agriculture Program of the Department of Agriculture. Women were empowered farmers, that in turn, removed gender inequality within the province. As such, it is hoped that this intervention would reduce poverty issues and food shortage. Sustainability of the program through various technical supports were recommended since organic rice production is tedious and vulnerable to pest infestation. This is to ensure positive impacts of organic farming leading to sustainable rice production in Lanao delNorte.

Keywords: women, organic rice production, sustainable agriculture, Lanao delNorte

Introduction

As an agricultural province, Lanao del Norte has supported the implementation of Republic Act No. 10068 or known as Organic Agriculture Act of the Philippines.The development of organic agriculture nationwide shall enhance farming scheme, global competitiveness, environmental integrity, food security and safety, and increase productivity and alleviate poverty. The program recognizes the potential of organic agriculture in enhancing the

value-adding component of agricultural exports and local consumption products. Organic agriculture dramatically reduces external inputs by refraining from the use of chemo-synthetic fertilizers, pesticides and pharmaceuticals. It allows the powerful laws of nature to increase both agricultural yields and disease resistance (www.bar.gov.ph/organic-agriculturepr ogram).

Philippine organic production area was reported at 52,546 ha in 2009 and employed around 70,000 producers/farmers (Maghirang et al., 2010). Organic agriculture management has become one of the most popular sustainable strategies to produce agricultural goods but reduce negative environmental effects of intensive agriculture such as biodiversity decline (Zechmeister, 2003).

The participation of women in adoption of organic rice production promotes a healthy environment and food safety.Women make important contributions to agriculture and rural economies of all regions. However, the exact magnitude as to the level of involvement and participation of women are very difficult to assess (http://www.fao,org/publications.sofa/en.).Despite women's important contributions to farming and livelihood, women have less access than men to knowledge and skills, productive assets, including agricultural inputs, improved seeds, land, credit, agricultural extension services, and small equipment/light machinery. Similarly, in the world of national and international agricultural research, women continue to be underrepresented and their contributions are not fully tapped (http://www.ricepedia.org/challenges/gender-and-equity).

Lanao delNorteenvisions to fully utilize the implementation of Organic Agriculture Act No. 10068 with the *Agri-Pinoy* Framework for Organic Agriculture Development through the adoption and implementation of sustainable agriculture in close collaboration with organic fertilizer producers and organic farming stakeholders, researchers, private sectors including women-led organizations like rural improvement clubs. The creations of Organic Agriculture Technical Committee from the Provincial to Municipal level manifested the strong support of the local government units.

Materials and Methods

Protocol visits to selected Municipal Agricultural Offices (MAOs) were conducted. Identification of targeted municipalities was based on the size of their rice areas particularly those who have adopted organic rice production. The Municipalities ofLala, Kapatagan, Salvador, Sapad, and Sultan Naga Dimaporowere chosen and have been prioritized during the conduct of field interviews and focused group discussions. This was done to assess the participation of women in organic rice production in their locality. The Agricultural Technologists involved in the implementation of organic rice program assisted and facilitated the survey by disseminating survey questionnaires containing different key steps on rice production. The resultswere used as guide in determining on what are those farming activities being performed or undertaken by the women sector. A special meeting with the officers and members of the Provincial Agricultural and Fishery Council (PAFC)chaired with women in one venue was also conducted. This is a private-led and government supported organization composed of national line agencies in agriculture, non-government organizations, people's organizations, young farmers and rural-based organizations.Issues and concerns being raised during the meeting added the emphasis on the role of women for agricultural productivity. This was translated into results from a SWOT analysis.

Results and Discussion

A reference map was used in the analysis of the physical characteristics of Lanao delNorte Province with a total land area of 309,666 hectares where about 28,120 hectares were allotted for rice production (Figure 1). Data were supplemented by information on food shortage experienced by various municipalities, and in turn, served as a challenge to optimize rice and corn crops yield to attain food security (Table 1).

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Figure 1. The 22 municipalities covered by the province of Lanao del Norte in Northern Mindanao.

Most of the households were experiencing food shortage per barangay within province. The municipality of Lala ranked top, which was followed by the municipalities of Kapatagan, Tubod and Sultan Naga Dimaporo. Meanwhile, the municipalities of Nunungan, Sapad and Baroy experienced less incidence of food shortage (Table 1).

Table 1. Information on food shortage experienced by the municipalities of Lanao delNorte.

Municipality	Number of Households	Households who experienced Food Shortage		Proportion to Provincial***
		Magnitude	Proportion to Municipal**	
Bacolod	4,087	269	6.58	3.85
Baloi	7,427	527	7.10	7.54
Baroy	4,769	85	1.78	1.22
Kapatagan	10,280	266	2.59	3.81
Kauswagan	5,368	168	3.13	2.40
Kolambugan	5,935	761	12.82	10.89
Lala	13,201	1,188	9.00	17.00
Linamon	2,677	133	4.97	1.90
Magsaysay	3,327	514	15.45	7.36
Maigo	4,409	419	9.50	6.00
Matungao	3,288	221	6.72	3.16
Munai	3,381	64	1.89	0.92
Nunungan	4,249	2	0.05	0.03
Pantar	3,886	172	4.43	2.46
Poona Piagapo	4,026	468	11.62	6.70
Salvador	6,493	160	2.46	2.29
Sapad	3,809	39	1.02	0.56
Sultan Naga Dimaporo	10,321	758	7.34	10.85
Tagoloan	2,117	328	15.49	4.69
Tangkal	2,136	225	10.53	3.22
Tubod	9,812	221	2.25	3.16
Total	**114,998**	**6,988**	**166.14**	**100.01**

***Number of households that experienced food shortage over total number of households per municipality.*
****Total magnitude of households who experienced food shortage in a barangay over total number of households who experienced food shortage in the province.*

On the average, there were 51 farmers who practiced organic rice production wherein it was highest in the municipalities of Kauswagan. There were no records for organic rice production in the municipalities of Linamon, Magsaysay and Tagoloan. There were 7,354 has. devoted for organic rice production or 40.43% has. out of the 18,187 total has. used for rice farming (Table 2).

Table 2. The rice producing municipalities of Lanao del Norte and the areas used for organic rice production.

Municipality	Rice Area(ha.)	Area used for organic rice production	Organic farming practitioner
Bacolod	40	34	40
Baloi	540	170	60
Baroy	320	160	50
Kapatagan	2856	1200	60
Kauswagan	330	330	80
Kolambugan	44	26	45
Lala	6288	2200	60
Linamon	-	-	-
Maigo	310	110	40
Magsaysay	-	-	-
Matungao	112	56	60
Munai	720	220	40
Nunungan	35	28	40
Pantar	125	70	50
Pantaoragat	40	30	50
Poona piagapo	205	110	40
Salvador	3180	1150	60
Sapad	1520	640	50
SultanNagaDimaporo	894	340	50
Tagoloan	-	-	-
Tangkal	79	40	50
Tubod	349	140	60
TOTAL	18,187	7354 (40.43)	Ave:51.32
Additional area for Upland rice production	More or less 10 hectares per report submitted by MLGUs		

Rice is one of the dominant crops in Lanao delNorte because it ranks as a third major crop next to coconut and corn. Meanwhile, the rice industry has the highest labor absorption. Organic rice industry in the country is in its infancy stage. The area devoted to organic rice production is about 0.35% (14,209 ha) with 34,990 farmer adaptors (Alfon and Redona, 2004). However, due to health benefits derived therein, health conscious consumers preferred to buy organically-grown crops (Basser and Vedra, 2015) either as safe staple food or other products for human consumption.

Women played vital farming roles along with men working in organic rice production. These farming activities included ploughing and harrowing the ricefields, handling and planting of seedlings, care and maintenance of the growing rice, harvesting, sale and market of the palay and milled rice (Table 3). Women helped men to address food shortage and promote additional income for the family for other expenses such as payment of school fees, medicine and other basic expenses of the family. Women's care for the rice plants were even at edge over men's care due to the so-called 'motherly care' that women treated rice plants significantly close to their hearts.

Table 2. Women participation in organic rice production in Lanao del Norte:

Gender division of labor in rice production			
Farm Activities	**Women**	**Men**	**Both**
Land preparation		X	
Seedbed preparation		X	
Ploughing			X
Harrowing			X
Leveling		X	
Care of seedlings		X	
Pulling and bundling of seedlings			X
Planting/Transplanting			X
Irrigation			X
Care of irrigation canal		X	
Care of crops			X
Mechanical weeding			X
Manual weeding			X
Organic Fertilizer application			X
Formulation/preparation of organic fertilizers using the various technologies			X
Picking of snails			X
Harvesting			X
Threshing			X
Hauling			X
Drying			X
Other farm activities			X

Although, women played significant roles in organic rice production, organic industry has been primarily in the hands of the private sector, non-governmental organizations (NGOs), and people organizations or cooperatives (Maghirang et al., 2010). Thus, a SWOT analysis was done. This is to project the strength, weakness, opportunity and threat that prevailed in organic rice production, as important engine for growth in rural economy and sustainable rice production of the province.

Findings were as follows:

STRENGTHS

1. Presence of active farmers' associations or cooperatives engaged on organic fertilizer production
2. Existence of organic farming technology and natural farming technology system
3. Supportive LGU leadership and Department of Agriculture Management

WEAKNESSES

1. Inability of some LGUs to finance organic agriculture program
2. Inadequate organic fertilizer production equipment.
3. Insufficient capital for farm inputs and adoption of recommended package of technology

4. Negative attitude ofsome farmers, resulting to: resistance/ slow adoption on recommendedorganic agriculture technology.
5. Limited source of organic production materials
6. Inadequate mobility support to field personnel
7. Hesitancy of farmers to adopt organic farming and use of organic fertilizer

OPPORTUNITIES

1. Agricultural productivity as one of the priority agenda of Governor Mohamad Khalid Q. Dimaporo's Administration.
2. Availability of agricultural programs, projects and services, as well as Accessibility to national govt. agencies
3. On-going implementation of World Bank and Philippine Government thru Department of Agriculture assisted Mindanao Rural Development Program-Adaptable Program Loan II (MRDP-APL 2) sub-projects in organic rice production to the seven (7) people's organizations in the Municipalities of Kapatagan, Lala, and Baroy under the component on Community Fund for Agricultural Development (CFAD).

THREATS

1. Low yielding effect upon shifting organic agricultural practices;
2. Unpredictable weather and Climatic conditions in producing crops.
3. Shifting of fertilizer application to the crop production areas to organic fertilizer inputs.

Conclusions and Recommendations

Women's role in organic rice production is very essential with the attitude of a mother's care leading into a successful rice production from field preparation, care and maintenance of the growing rice, harvest and even its market. With these women's attitude, it is hoped that they would be fully recognized and valued to sustain rice production for the present and future generations. Not only in rice farming, women in Lanao del Norte grow most of the crops and are primarily responsible for preparing, storing and processing food. They contribute voluminous efforts and services in rice industry from production, post handling and marketing. With the great potential of the province to produce more organically grown rice, it is recommended to convince more farmers through enhanced farming education and post-harvest technology and assist in disseminating essential information stressing out the benefits and advantages in using organic inputs for the rice farming. Thus, it is hoped that this leads into a healthy environment, safe and clean food to eat and restore the fertility and productivity of the soil, not only for organic rice but for other crops raised.

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