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Women Farmers and the Status and Prospects of Organic Farming in the Ilocos Region

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Abstract - *This study determined the perceived status, prospects and problems encountered in organic farming systems amongst its respondents. The study employed the descriptive-evaluative method of research where all relevant data and information on the status, prospects, and problems encountered in relation to farming systems as perceived by women organic practitioners were gathered. Findings show that in terms of the status of organic farming systems, the areas of availability of organic training post and adoption rate only moderately implemented. The prospects of organic farming in terms of environmental preservation found out to be the most acceptable among the respondents, while prospects in terms of economic contribution the least acceptable. Furthermore, there were perceived problems found in the areas of availability of trading post, incentives and financial assistance, and adoption rate.*

Keywords – organic agriculture, organic farming, women in agriculture, gender and organic farming, women organic farmers

INTRODUCTION

There has been an exponential increase in the global production and sale of organically grown food. According to a survey by FiBL conducted in 2018, there are 178 countries in the world with organic activities, with 57.8 million hectares under organic management involving 2.7 million farmers. This represents an increase of 12.8% from 2015. The global market is growing, and consumer demand is increasing with $ 89.7 billion. This has increased five-fold since the year 2000. The United States remains to be leading market with $43.1 billion followed by Germany with $10.5 billion and France with $ 7.5 billion. [1] In the Philippines, the reported organic production area of the Philippines in 2009 was only 52,546 ha, but, by 2015, this has already grown to 234,642.15 ha. The 2015 figure is 113.15% over the 2014-reported organic area. [2]

The passage of Republic Act 10068 otherwise known as the Organic Agriculture Act of 2010 (Phil.) became instrumental in making the Philippine government, through the Department of Agriculture (DA), an active supporter and mover of organic industry. [3] The law outlines the policy of the State to promote, propagate, develop further, and implement the practice of organic agriculture in the Philippines that will cumulatively condition and enrich the fertility of the soil, increase farm productivity, reduce pollution and destruction of the environment, prevent the depletion of natural resources, further protect the health of farmers, consumers, and the general public, and save on imported farm inputs. Organic agriculture includes all agricultural systems that promote the ecologically sound, socially acceptable, economically viable and technically feasible production of food and fibres. [4] Organic farming is a form of agriculture which excludes the use of synthetic fertilizers, pesticides and plant growth regulators while maintaining the fertility demands of various crops to avoid excessive depletion of soil nutrients. [5]

While the law made organic agriculture sustainable under the Philippine setting, its growth still largely depends on the market, both

local and export. [6] As observed, only a small segment of the market patronizes organic produce and products due to the price premium attributed to an inefficient supply chain. [6][7][8] Currently, the profitability of organic farming hinges on these price premiums. [7] Thus, the prospects in organic farming is reliant on increasing consumer acceptance and its undeniable environmental benefits. [9]

Some of the major constraints facing organic farmers are lack of technical expertise, lack of market information and the high costs of certification. Further, low adoption rate of organic farming could be attributed to the mixed reviews on realized benefits, particularly on productivity and profitability. [9] [10]

The share of agriculture in the global labor force has been in decline since the 1990s. [11] However, the proportion of women working in agriculture increased, and particularly in developing countries. This trend has been called the feminization of agriculture. This feminization of agriculture is caused by increased "casualization" of work, unprofitable crop production and distress migration of men "for higher casual work in agriculture and non-agriculture sectors", leaving behind women to take up low paid casual work in agriculture. [12] Aggregate data shows that women comprise about 43 percent of the agricultural labour force globally and in developing countries. [13] While the trend may be increasing, it was found that women are over represented in unpaid, seasonal and part-time work, and are paid less than men in similar agriculture jobs. [13] On the other hand, silver lining has been found in organic agriculture, where farmers are younger, better educated and more likely to be women than conventional farmers. [14]

Studies have also shown the effect of conventional gender roles on the types of farming jobs and tasks available to women. While women are found to be less efficient in farming, they are found to be better at controlling farming costs. [15] They are also more likely to participate in farm production and management of vegetable and cash crop farms than heavily mechanized and capital intensive field crop farms. [16] They also take a larger share of performing domestic tasks and directly engage with the farm's customers. [17] This trend shows that organic and sustainable farming has the potential to create new structures that actively work towards achieving women's empowerment and protecting the use of indigenous knowledge. [18]

Initiatives taking advantage of organic farming as a unique context for women's empowerment have already been started. [19] In the Philippines there are groups that foster the increased participation of women in organic farming. One of these groups is Kasarinlan – Kalayaan, Inc. (SARILAYA) which aims to promote women empowerment and healthy living through nutrition, through teaching women from rural communities some methods in organic farming providing them with skills that help augment their family income and broaden their abilities. [20]

The researchers recognized significant trends particularly on the increase participation of women in agriculture and the potential of organic farming to be an avenue for women empowerment which provided the grounds to conduct an assessment of the status and prospects of organic farming and the identification of problems encountered from the perspective of women organic farming practitioners in Ilocos Region. Further this study will explore the role of gender and information technology in bringing solutions and imporvements to organic farming practices [30][31]

OBJECTIVES OF THE STUDY

This study aims to assess the status and prospects of organic farming and the problems encountered from the perspective of women practitioners of organic farming in Ilocos Region. Specifically, the researchers endeavour to:

1. Create a profile of the women organic farming practitioners along variables of age, civil status, highest educational attainment, years engaged in organic farming, relevant trainings and seminars

attended, total land area used in organic farming;
2. Identify the motivating factors for women practitioners to adopt organic farming practices;
3. Distinguish the organic farming practices women practitioners employ;
4. Gauge the perceived status of organic farming among women farmers along identified areas of support enabled by RA 10068;
5. Assess the perceived prospects in organic farming among women farmers; and
6. Determine the seriousness of problems encountered by women farmers in organic farming along areas of support enabled by RA 10068.

MATERIALS AND METHODS

In order to address the fulfill the objectives of the study, the researchers employed descriptive-evaluative research approaches as an attempt to describe a group of people, a phenomenon, or an event and to assess whether a particular intervention, process, or procedure is able to change behavior. [21] The research is designed to be cross-sectional as the researchers aim to collect all of the data at the same time. [22] It also made use of quantitative methods, thus the results of the analysis can be used to describe or note numerical changes in measurable characteristics of a population. [23][32]

There were a total of three hundred and twenty (320) women farmers who responded to the survey. The researchers made use of stratified sampling in getting the target number of respondents for the study, the samples taken were proportional to the corresponding strata, in this case the provinces of the Ilocos Region. [24]

The researchers personally administered the survey questionnaire to the respondents. The survey instrument was divided into four parts. The first, collected data on the profile of the women farmers, the second part collected responses on the perceived status of implementation of organic farming, the third involved questions focusing on the prospects of organic farming, and the last part contained questions that measure the level of seriousness of problems encountered. The research instrument is primarily anchored on the National Organic Agriculture Program with additional questionnaires adapted from various studies and existing literature. [4][5][6][9][25] [26][27][28][29]

Upon the completion of the survey and arriving at the target number of respondents, the questionnaires were tallied into Microsoft Excel and cleaned and coded for importing into IBM SPSS for analysis. Frequency distribution and percentages were used to present the profile of women farmers along identified variables, while the latter was used to present the motivating factors and organic farming practices of the women farmers. Likert scale rating with descriptive equivalence was used to analyze the perceived status and prospects of organic farming, and the problems encountered by women farmers. The researchers used average weighted means (AWM) to summarize the ratings provided by the respondents on the status and prospects of organic farming and the seriousness of problems they encountered.

RESULTS AND DISCUSSION

The profile of women organic farmers is presented in Table 1. Most of the women organic practitioners are ages 51 and above (64.58%). 85.94% of women organic practitioners are married. Most of the women practitioners are high school graduate with 43.13%. 48.75% of respondents or 156 of them responded that they have engaged in organic farming for 7-10 years. This coincides with the passage of RA 10068. This implies that the Organic Agriculture Act of 2010 was instrumental in influencing farmers to shift from conventional to organic farming. 89 respondents or 27.81% responded that they have been to 1-3 seminars on organic farming. Respondents with 1,000 square meters of farm got the highest number of responses with 90 or 28.13% of the respondents.

Table 1. Profile of the Women Organic Farmers

Variables	Frequency	Percentage
Age		
20 and below	1	0.31
21 to 30	14	4.39
31 to 40	25	7.84
41 to 50	73	22.88
51 to 60	137	42.95
Above 60	69	21.63
Civil Status		
Single	24	7.50
Married	275	85.94
Widow/er	17	5.31
Separated	4	1.25
Highest Educational Attainment		
Elementary	31	9.69
High School	138	43.13
College Level	69	21.56
College Graduate	82	25.63
Years Engaged in Organic Farming		
One year or less	25	7.81
2-3 years	56	17.50
4-6 years	58	18.13
7-10 years	156	48.75
More than 10 years	25	7.81
Seminars And Trainings Attended		
0	5	1.56%
1-3	89	27.81%
4-6	79	24.69%
7-10	80	25.00%
>10	67	20.94%
Total Land Area (in square meters)		
<1000	90	28.13
1000 – 2500	76	23.75
2500 – 5000	88	27.50
>5000	66	20.63

Table 2 presented the motivating factors that influenced women farmers to do organic farming. Based on the results, the Department of Agriculture (DA) was the most instrumental in motivating farmers to switch to organic farming with 91.56%. This further supports the earlier implication of the passage of RA 10068. As the primary implementing agency of the Organic Agriculture Act of 2010, the DA was most instrumental in boosting the organic industry. With 90.94%, farmers are also motivated by their concerned for their health as shown in the results. This is primarily due to the use of organic inputs which are less harmful than industrial grade fertilizers and pesticides. Seminars and trainings (90.31%) indicate that the Department of Agriculture has been conducting extension programs periodically for organic farmers.

Table 2. Motivating Factors for Organic Farming

Motivating Factors	Percentage
Department of Agriculture	91.56
For health reasons	90.94
Seminars and Trainings	90.31
Need to bring back soil fertility	85.31
Environmental conservation	84.06
Resources are available within the farm	83.44
Experiences of other farmers	75.00
Cheaper cost of inputs	74.06
Old practice	68.75
Market demand	65.63
Easy to do	51.56

This is an evidence of the strong support coming from the Department of Agriculture through the National Organic Agriculture Program. These motivating factors mirror the findings of Landicho, et. al (2014), with the exemption of cheaper cost of inputs. [28] It could be an indication of the development of an organic farming supply chain, while this can be welcomed as a development in the prospects of organic farming, the commercialization of organic farm inputs could imperil smaller

organic farms who are increasingly reliant on purchasing their supplies and do not have the capability to produce organic farm inputs on their own.

Table 3 presented the organic farming practices observed by women farmers. The use of organic fertilizers is the most common organic farm practice with 96.25% of women farmers adopting the practice. This is followed by the use of vermicast/compost with 89.38% and the use of green manure with 82.19%. These practices were adopted by the farmers through the seminars and trainings conducted by the Department of Agriculture. The top organic farming practices remain the same with the study of Landicho, et. al. (2014) however the results from the women farmers indicated a trend in the use of green manure as it has overtaken the use of botanical pesticides as one of the top organic farming practice. [28] However, the latter is still not far behind with 81.88%. Plants such as madre de cacao and lemongrass are cheaper and safer alternatives as they exude odors that attract pests from the crops preventing damage.

Table 3. Organic Farming Practices

Organic Farming Practices	Percentage
Use of organic fertilizers	96.25
Use of vermicast/compost	89.38
Use of green manure	82.19
Use of botanical pesticides	81.88
Mulching	81.56
Use of indigenous varieties	75.00
Planting of alternate hosts	68.75
Production of free-range chicken	54.69
Use of chemical-free forage crops as feeds	46.88

The results of the perceived implementation status of organic farming among women farmers is presented in Table 4. The areas of Accreditation and Certification, Labeling and Retailing, Incentives and Financial Assistance, Monitoring and Reporting were Highly Implemented with mean ratings of 3.86, 3.78, 3.41, and 3.67 respectively. On the other hand, both Availability of Organic Trading Post and Adoption Rate garnered mean ratings of 2.95 and 3.29 which translates that these areas of organic farming are merely Moderately Implemented. This means that strategies implemented under the National Organic Agriculture Program (NOAP) focusing on Availability of Organic Trading Post and Adoption Rate are not as effective in delivering the desired goals and objectives for organic farming. [4]

As one of the key components of NOAP, market development includes the availability of trading posts for organic products as one of the intended action plans. The initiative to establish such trading post falls upon local chief executives within their respective area of jurisdiction. While this can manifest the lack of support coming from local government units, market forces such as the presence of stronger players in public markets put pressure on its establishment. Poor implementation of organic farming in terms of the availability of organic trading post has been pointed out by Bello (2008) and Porciuncula, et. al. (2015) with the apparent lack of distribution channels and limited market for organic produce and local markets which offer premium pricing for organic products. [9][26]

Adoption rate counts as one of the key performance measures for NOAP. The key components that intend to increase the number of organic agriculture adopters involved mechanisms for production and technology support, extension and capability building, and promotion, advocacy, and education of consumers and producers. Production and technology support and extension and capability building were found to be effective in driving adoption among farmers as seen in Table 2. This means that programs on promotion and information dissemination are not reaching its intended targets and campaigns on raising awareness and education are ineffective. This reinforces the findings of Pantoja, et. al. (2016) wherein farmers primarily cited perceived lowered yield, misinformation which resulted to

misconceptions, and perception that organic farming was time consuming as barriers to adoption. Poor implementation to drive adoption rate can also be further explained by prospects of profitability of shifting to organic farming among conventional farmers. [10]

Table 4. Status of Organic Farming Systems

Area	AWM	Descriptive Equivalent
Accreditation and Certification	3.86	HI
Labelling and Retailing	3.78	HI
Availability of Trading Post	2.95	MI
Incentives/Financial	3.41	HI
Monitoring and Reporting	3.67	HI
Adoption Rate	3.29	MI

LEGEND: 1.00 – 1.80: Lowly Implemented (LI); 1.81 – 2.60: Fairly Implemented (FI); 2.61 – 3.40: Moderately Implemented (MI); 3.41 – 4.20: Highly Implemented (HI) ; 4.21 – 5.00: Very Highly Implemented (VHI)

Table 5 presented the perceived prospects of organic farming among women farmers. Acceptance of organic farming is found to hinge on Environmental Preservation prospects with an AWM of 4.44 which is Very Highly Acceptable. As shown in Table 2, environmental conservation has been cited by 84.06% of women farmers as among the primary motivating factors for practicing organic farming. This also supports the findings of Bello (2008); Carating and Tejada (2014); Landicho, et. al. 2014; and Pantoja, et. al (2016) on the environmental friendliness of organic farming over conventional farming with its use of natural pest control, ability to enhance biodiversity, and improving soil quality. [9][10][25][27][28]

Organic farming prospects in terms of Production Sustainability and Consumer Acceptance incurred AWMs of 4.08 and 3.96 respectively. Bello (2008) and Landicho, et. al. (2014) called for the need to increase awareness among farmers of the need for sustainable production. Maghirang, et. al. (2011) and Carating and Tejada (2014) has already provided evidences of existing sustainability mechanisms in place to support organic farming. [6][9][25][28] High acceptability in terms of Customer Acceptance is in consonance with Landicho, et. al (2014) which anchored the acceptability of organic farming on the health benefits to both farmers and consumers echoing similar findings of Bello (2008). [28] Moreover, Table 2 cited health reasons as the second strongest motivator among women farmers to adopt organic farming practices.

However, prospects of organic farming in terms of Economic Contribution found less acceptability with an AWM of 3.26 which translates to Moderately Acceptable. Premium pricing limited the number of markets that organic products can penetrate. On the other hand, the case for increased acceptability in terms of economic prospects has been found by Porciuncula, et. al. (2015) in their study of organic vegetable farms which has shown better yield, higher net income and better returns on total operating expenses over conventional farming. [26] Results were mixed however with Conrado and Antonio (2016) whose study found that returns on certain crops are higher for conventional practices. [27]

Table 5. Prospects of Organic Farming

Areas of Opportunity	AWM	Descriptive Equivalent
Consumer Acceptance	3.96	HA
Environmental Preservation	4.44	VHA
Economic Contribution	3.26	MA
Production Sustainability	4.08	HA

LEGEND: 1.00 – 1.80: Less Acceptable (LS); 1.81 – 2.60: Slightly Acceptable (SA); 2.61 – 3.40: Moderately Acceptable (MA); 3.41 – 4.20: Highly Acceptable (HA) ; 4.21 – 5.00: Very Highly Acceptable (VHA)

Table 6 presents the results of the level of seriousness of problems encountered in Organic Farming. All of the areas incurred AWMs which can be interpreted as Moderately Serious. Problems encountered in terms of Availability of Trading Post were found to be the most serious with an AWM of 3.17. This is followed by Adoption Rate and Incentives/Financial with

AWMs of 3.04 and 2.85 respectively. On the other hand, Accreditation and Certification was found to be the least problematic area with an AWM of 2.61. This is followed by Monitoring and Reporting and Labelling and Retailing with AWMs of 2.69 and 2.70 respectively.

The seriousness of problems encountered in terms of Availability of Trading Post was found to be in agreement with findings from Bello (2008) and Porciuncula, et. al. (2015). [9][26] The lack of available trading posts as distribution channels make it difficult for organic farmers within their locality to reach their intended markets. As pointed out by Pantoja, et. al (2016) ad Adesope, et. al. (2012), the problem with adoption rate stems from an insufficient promotional campaign to convert conventional farmers to organic farming as problems with conversion often arise from misconceptions about organic farming. Issues that were found with high certification costs from Bello (2008) and Porciuncula, et. al. (2015) does not seem to be much of a problem as it was before. [5][9][10][26]

Table 6. Problems Encountered in Organic Farming

Area	AWM	Descriptive Equivalent
Accreditation and Certification	2.61	MS
Labelling and Retailing	2.70	MS
Availability of Trading Post	3.17	MS
Incentives/Financial	2.85	MS
Monitoring and Reporting	2.69	MS
Adoption Rate	3.04	MS

LEGEND: 1.00 – 1.80: Least Serious (NS); 1.81 – 2.60: Less Serious (LS); 2.61 – 3.40: Moderately Serious (MS); 3.41 – 4.20: Serious (S) ; 4.21 – 5.00: Very Serious (VS)

CONCLUSION AND RECOMMENDATION

Most of the women farmers are middle aged and small scale farmers with a majority of them using a land area less than 1 hectare. The Organic Agriculture Act of 2010 is effective in motivating conventional farmers to switch to organic farming. Emerging trends in organic farming are evident as organic farming practices that were not used are being adopted. Currently, there is minimal support among local government units in supporting organic farming practitioners. Incentives and financial assistance programs are very effective in motivating organic farming practitioners. However, this does not extend to non-organic farmers as implicated by problems in adoption rate. Difficulties about the economic prospects in organic farming are present, but there is a strong consensus on its eco-friendly nature and inherent ability to protect human health.

The Department of Agriculture should facilitate programs to encourage people to switch and adopt organic farming practices specially among younger practitioners. Incentives for practicing organic farming is effective in driving adoption and this should be coupled by a comprehensive program which includes seminars and trainings for non-organic farming practitioners. The establishment of a cooperative composed of women organic farmers is highly recommended to take advantage of the prospects of organic farming practices. The development of a mobile application for trading organic farm produce can be a viable option to address challenges on availability of trading posts for organic farmers.

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