

Challenges Met After Certification: The Case of Organic Agriculture Production (OAP) NC II Graduates from Selected Learning Sites in Leyte Province

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ABSTRACT

There is a dearth of information on the challenges encountered by Organic Agriculture Production (OAP) NC II graduates from the learning sites in Region VIII after certification, especially in Leyte Province. The research was generally carried out to determine these challenges from the OAP NC II graduates in selected learning sites in Leyte Province namely: Gold Farm in Baybay City, Leyte; Chandria Integrated Farm in Baybay City; and Juanito Eco Farm School for Practical Agriculture in Kananga, Leyte. The graduates can provide opinions on the quality of the training, the usefulness of the competencies acquired, and the efficacy of the training undergone. Through this, learning sites can make sure that the curriculum is tailored to the needs of the trainees and their graduates have enough know-how on organic farming. Proportional stratified sampling was employed to identify 146 respondents of the study. The respondents of the study were the graduates of Organic Agriculture Production NC II from 2018 to 2022 from above-mentioned three selected learning sites. Both personal and phone interviews were done to collect pertinent data using a researcher-made survey questionnaire. Descriptive statistics were used to analyze the data gathered. The study revealed that most of the respondents of the study were adults, married, and college graduates. It also revealed that the inapplicability of OAP NC II to their existing job or career, insufficient land space, and low yield were the most common challenges raised by respondents following Organic Agriculture Production NC II training. The study recommended that before accepting training participants, learning sites should ensure that participants have a clear objective for future usefulness of the training.

Keywords: applicability, certification, learning site, organic agriculture, training

INTRODUCTION

The Organic Agriculture Production NC II is a vocational training program offered in the Philippines, designed to provide individuals with the necessary knowledge and skills in organic farming practices. This program is under Technical Education and Skills Development Authority (TESDA) that equips learners with the competence to implement organic agriculture methods

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effectively and responsibly. TESDA is government agency aims to provide education and develop work skills among underprivileged Filipinos (Abiog 2022). To create organic farm products like chicken and vegetables, as well as organic supplements like fertilizer, mixtures, and extracts, a trainee must meet the requirements of Organic Agriculture Production. (Homillano 2023). Upon successful completion of the Organic Agriculture Production NC II program, trainees are awarded the National Certificate II, which certifies that they have achieved a certain level of proficiency in organic farming. This certification is recognized and endorsed by the Philippine government and various industries, making graduates more employable and qualified to pursue careers in the agriculture sector, particularly in the organic produce market. Beyond simply imparting theoretical knowledge, the curriculum stresses practical training and hands-on experience, giving students real-world insights into organic agricultural methods. By promoting sustainable agricultural practices, environmental conservation, and healthier food options, the Organic Agriculture Production NC II plays a crucial role in contributing to a greener and more sustainable future for agriculture in the Philippines.

In relation to OAP NC II, TESDA has tapped Learning Sites for Agriculture (LSA) of Agricultural Training Institute (ATI) to become partners in conducting OAP NC Training. The learning sites are private farms that share useful information and technologies in Agriculture (Gordo et al 2019). Using the private sectors can increase the reach of advisory services (Davis et al 2020) and the Philippine government should work with private investors to revive the interest in Agriculture (Santiago & Roxas 2015). These learning sites play a crucial role in facilitating technology transfer within the agricultural sector. Reliable information and technical guidance are required for effective promotion of new technologies and the adoption of new technologies is a critical requirement for the effective development of the agriculture sector. (Silva & Broekel 2016). The learning sites serve as demonstration centers for showcasing cutting-edge agricultural technologies where farmers, agricultural extension workers, and other stakeholders can access and learn about innovative agricultural technologies. People involved in agriculture require better skills, information, and ideas to produce agriculture that can meet complicated demand patterns, decrease poverty, and conserve or enhance ecological resources (Feder et al 1999).

According to *The World of Organic Agriculture 2021 Statistics and Emerging Trends* authored by Willer et al (2021), there are 187 nations where organic agriculture is practiced, and at least 3.1 million farmers handled 72.3 million hectares of agricultural land organically. The International Federation of Organic Agriculture Movements (IFOAM) reports that the Philippines made up 30% of all certified producers in Asia. Organic agriculture has become a definite alternative to industrial forms of agriculture in the country (Maohong 2018). Over the years, the organic agriculture sector has witnessed notable growth and development, largely driven by increasing consumer awareness and demand for healthier and more environmentally conscious products. Government support has played a pivotal role in fostering the expansion of organic farming in the country. According to Gonzalvo et al (2021), Republic Act (RA) 11511, which was enacted in 2020, revised the Philippine Organic Agriculture Act of 2010, also known as RA 10068. It has been established that organic farming has benefited Filipino farmers in terms

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of socioeconomics, energy use, and the environment. The amendment formally recognizes the Participatory Guarantee mechanism (PGS), a locally centered quality assurance mechanism for organic agriculture verification. Nevertheless, the adoption of organic agriculture in the country has confronted challenges. According to Wiggins & Nandwani (2020), the fact that conventional farming output regularly outperforms organic production, it is one of the main obstacles facing an organic farming system. The yield differences between organic and conventional farming have remained persistent. Reduced yields in organic farming may make people hesitant to switch to organic practices as, according to people who argue, there is no good reason to switch if yields are lower. The transition from conventional to organic farming can pose financial constraints and yield fluctuations, making it imperative to provide support and technical assistance to farmers during this critical phase. According to a study of Lumbo & Salamanca (2023) on constraints to adoption of organic farming in Occidental Mindoro, farmers express dissatisfaction with the unstable market structure and the absence of a set price for goods produced on organic farms. They also take issue with the government's lack of sincerity in encouraging organic farming. Agricultural technicians are paid by private companies to promote non-organic items in addition to organic farming. The practices of organic farming are more expensive, time-consuming, and complicated than those of conventional farming, and there is no consistent supply of organic inputs. The organic product certification process is expensive, time-consuming, and slow. Because they lack a license, farmers are unable to compete with other producers in the nation for favorable farm gate prices and market access. According to a study of Olabisi et al (2015) conducted in Negros Oriental, land space is also a constraint to organic adoption since farmers with limited fields are unable to create sufficient on-farm organic inputs to maintain yields and the high cost of certification can also be a barrier for smallholders seeking organic accreditation.

Despite the challenges, organic agriculture in the country has offered several benefits to Filipino farmers, consumers, and the environment. Organic agriculture offers good opportunities to ensure food security and nutrition (Landicho et al 2014). Organic farming practices lead to improved soil fertility, reduced greenhouse gas emissions, and decreased chemical residues in food products. Consumers are now increasingly recognizing the health benefits of organic produce which often contains higher nutrient levels and fewer harmful chemicals. According to Benbrook et al (2021), the dangers associated with pesticide exposure in food can be substantially reduced by consuming organic food, particularly fruits and vegetables. There are financial benefits to organic farming since organic goods are in high demand on both domestic and foreign markets (Declaro-Ruedas 2019). The extent of implementation of organic agriculture in the Philippines has seen substantial growth and positive developments. Government support, increasing consumer demand, and a thriving organic market have been instrumental in encouraging farmers to adopt sustainable and environmentally friendly farming practices in the country. The Philippine government, through its various agencies and agricultural departments, continues to support organic farming by providing financial assistance, technical training, and market access opportunities for organic producers. Public awareness campaigns and educational programs also aim to inform consumers

about the benefits of choosing organic products, encouraging sustainable and responsible consumption practices.

There is a dearth of information on the challenges encountered by Organic Agriculture Production (OAP) NC II graduates from the learning sites in Region VIII after certification, especially in Leyte Province. The research was generally carried out to determine these challenges from the OAP NC II graduates in selected learning sites in Leyte Province.

METHODOLOGY

The study was carried out in the province of Leyte, where three selected Learning Sites for Agriculture (LSA) were located namely: Gold Farm at Brgy. Kan-ipa, Baybay City; Chandria Integrated Farm at Brgy. Gacat, Baybay City; and Juanito Eco Farm School for Practical Agriculture at Brgy. Montebello, Kananga. The respondents of this study were graduates of Organic Agriculture Production NC II in the selected Learning Sites for Agriculture in Leyte Province. Only 146 of the total population of 356 graduates from three learning sites from 2018 to 2022 were the respondents of this study.

Table 1. Respondents of the study

LEARNING SITE	POPULATION	SAMPLE SIZE
GOLD Farm	139	57
JEFSPA	179	73
Chandria Integrated Farm	38	16
Total	356	146

The study used Cochran’s Formula to identify the total number of respondents after which proportional stratified sampling was employed to determine the sample size per learning site. This study used quantitative research to get information and analysis from the respondents. Survey design was employed using interview schedule and phone interview. Permission was secured to conduct the study from three selected learning sites. Secondary data such as the list of graduates were obtained from three learning sites. Researcher-made survey questionnaire containing questions on the socio-economic and demographic characteristics of the respondents and open-ended question that identified the problems/constraints encountered in the implementation of the program. The data on respondents’ socio-economic and demographic characteristics were analyzed using descriptive statistics such as frequency counts, percentages, ranges, and means. Microsoft Excel and Stata statistical software (version 14.0) were used in coding and analyzing the data. The data gathered were analyzed by the Statistician.

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RESULTS AND DISCUSSION

Socio-demographic characteristics of the respondents

Table 2 presents socio-demographic characteristics of the respondents that includes the following variables such as age, sex, marital status, educational attainment, and eligibility. The table revealed that majority of the respondents were in the age brackets of 23-34 (42.47%) and 35-45 (30.82%). These individuals were considered as young and middle-aged adults. The study of du Plessis, Anstey, and Schlumpp (2011) supported that usually adults participate in educational programs for personal reasons, social contact, and the desire to retain high self-efficacy and functioning (both cognitive and physical). This implies that people in these age groups can participate in a variety of training and courses that will help them improve their skills, knowledge, and professional development.

More than half of the respondents (54.11%) were male, while the remaining 45.89% were female. This represents the nearly equal representation of gender among the respondents, demonstrating gender responsiveness in the Organic Agriculture Production NC II training. The study of Rosales (2022) supported that vocational training should remove gender inequalities. The table further revealed that more than half of the respondents (57.53%) were married, while 32.19% were single. Only a small percentage of respondents reported to be widowed (4.11%), separated (3.42%), and live-in (2.74%). The findings of the study of Alsiken-Nanglegan (2023) revealed that 70% who engaged to organic agriculture production training program were married. In terms of educational attainment, the majority were college graduates (45.21%), followed by college level (17.81%) and high school graduates accounted for 14.38%.

A further look on the table also revealed that aside from being NC II holders (64.04%), some respondents were PRC license holders (15.35%). Francisco & Jasmin (2023) stated that individuals with higher education levels are engaging, and professionals are increasingly participating in technical vocational education and training programs as they have found it to be beneficial for their career growth. This signifies that most of the respondents were educated and intended to obtain OAP NC II not only to enhance their skills and knowledge in organic agriculture, but also for job opportunities since NC II holders are what most industries usually require locally and globally according to Rosales (2022).

Socio-economic characteristics of the respondents

When economic status was concerned, Table 3 presents socio-economic characteristics of the respondents that includes the following variables such as employment status, number of years being employed, type of business, and estimated monthly income. As for employment, there were three categories: self-employed (35.62%), unemployed (4.11%), and employed (60.27%). The study of Alsiken-Nanglegan (2023) supported this claim wherein 80% of the OAP graduates had employment after the training. This was also supported by the study of Tolento et al (2022) that most of the graduates were employed. This implies that the training program became useful to some of the graduates.

Nevertheless, some of the respondents who were employed claimed that OAP

NC II was not applicable to their current job or career as shown in Table 4. In relation to this, over half of those who worked (57.95%) was employed for less than 1-6 years, while 39.77% was employed for 7-12 years. Meanwhile, for those who were self-employed, 73% of them engaged into farming and the remaining 27% were into non-farming type of business. Table 3 also revealed that over 41.78% of all respondents had a monthly income bracket ranging from PHP13,000 to PHP19,000. Few of the respondents had a range of PHP5,000 to PHP12,000 and PHP27,000 to PHP33,000 with a percentage of 38.36% and 13.01% respectively. On the other hand, the remaining 3.42% had a monthly income ranging from PHP20,000 to PHP26,000 and PHP34,000 to PHP40,000.

Table 2. Socio-demographic characteristics of the respondents

SOCIO- DEMOGRAPHIC CHARACTERISTICS	GOLDF		CIF		LEARNING SITE JEFSPA		TOTAL	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
Age								
23-34	23	15.75	6	4.11	33	22.60	62	42.47
35-45	17	11.64	8	5.48	20	13.70	45	30.82
46-56	14	9.59	1	0.68	14	9.59	29	19.86
57-67	2	1.37	1	0.68	4	2.74	7	4.79
68-78	1	0.68	0	0	2	1.37	3	2.05
Sub-total	57	39.03	16	10.95	73	50	146	100
Range	23-78		26-60		23-74		23-78	
Mean	38.90		37.69		38.67		38.42	
Sex								
Male	39	26.71	11	7.53	29	19.86	79	54.11
Female	18	12.33	5	3.42	44	30.14	67	45.89
Sub-total	57	39.04	16	10.95	73	50	146	100
Marital Status								
Single	22	15.07	4	2.74	21	14.38	47	32.19
Married	30	20.55	11	7.53	43	29.45	84	57.53
Widowed	2	1.37	0	0	4	2.74	6	4.11
Separated	1	0.68	1	0.68	3	2.05	5	3.42
Live-in	2	1.37	0	0	2	1.37	4	2.74
Sub-total	57	39.04	16	10.95	73	49.99	146	100
Educational Attainment								
Elementary Level	3	2.05	0	0	6	4.11	9	6.16
Elementary Graduate	1	0.68	0	0	2	1.37	3	2.05
Highschool Level	3	2.05	1	0.68	7	4.79	11	7.53
Highschool Graduate	6	4.11	2	1.37	13	8.90	21	14.38
College Level	11	7.53	3	2.05	12	8.22	26	17.81
College Graduate	25	17.12	9	6.16	32	21.92	66	45.21
MS/MA level	6	4.11	0	0	1	0.68	7	4.79
Masteral Graduate	2	1.37	1	0.68	0	0	3	2.05
Sub-total	57	39.02	16	10.94	73	49.99	146	100

Table 2 continued to next page ..

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Table 2 continued ..

*Eligibility (n=228)								
NC I	5	2.19	0	0	2	0.88	7	3.07
NC II	57	25	16	7.02	73	32.02	146	64.04
NC III	4	1.75	2	0.88	3	1.32	9	3.95
NC IV	3	1.32	1	0.44	1	0.44	5	2.19
PRC License	13	5.70	5	2.19	17	7.46	35	15.35
CSC-Prof	6	2.63	4	1.75	6	2.63	16	7.02
CSC-Sub-prof	2	0.88	0	0	2	0.88	4	1.75
Trainers'	3	1.32		1.32	0	0	6	2.63
Methodology			3					

***Multiple Responses**

Table 3. Socio-economic characteristics of the respondents

SOCIO-ECONOMIC CHARACTERISTICS	<u>LEARNING SITE</u>							
	GOLDF		CIF		JEFSPA		TOTAL	
	FREQ.	%	FREQ.	%	FREQ.	%	FREQ.	%
<u>Employment Status</u>								
Employed	40	27.40	12	8.22	36	24.66	88	60.27
Self-employed	14	9.59	4	2.74	34	23.29	52	35.62
Unemployed	3	2.05	0	0	3	2.05	6	4.11
Sub-total	57	39.04	16	10.96	73	50	146	100
<u>No. of years working (n=88)</u>								
<1-6	37	42.05	11	12.5	3	3.41	51	57.95
7-12	1	1.14	1	1.14	33	37.5	35	39.77
13-18	1	1.14	0	0	0	0	1	1.14
19-24	0	0	0	0	0	0	0	0
25-30	1	1.14	0	0	0	0	1	1.14
Sub-total	40	45.47	12	13.64	36	40.91	88	100
Range	<1-30		1-7		1-8		<1-30	
Mean	4.41		3.75		4.03		4.06	
<u>Type of business (n=52)</u>								
Farming	10	19.23	3	5.76	25	48.07	38	73
Non-farming	4	7.69	1	1.92	9	17.31	14	27
Sub-total	14	26.92	4	7.68	34	65.38	52	100
<u>Estimated Monthly Income</u>								
<5,000-12,000	20	13.70	5	3.42	31	21.23	56	38.36
13,000-19,000	27	18.50	7	4.79	27	18.49	61	41.78
20,000-26,000	5	3.42	0	0	0	0	5	3.42
27,000-33,000	3	2.05	3	2.05	13	8.90	19	13.01
34,000-40,000	2	1.37	1	0.68	2	1.37	5	3.42

Table 3 continued to next page ..

Table 3 continued ..

Sub-total	57	39.04	16	10.94	73	49.99	146	100
Range	5,000	-40,000	12,000	-35,000	5,000	-37,000	5,000	-40,000
Mean	15,263		17,563		15,875		16,234	

Problems encountered by the respondents after Organic Agriculture Production NC II training

Table 4 presents the problems encountered by the respondents after Organic Agriculture Production NC II training. It can be gleaned in the table that the most common problems encountered by the respondents were the inapplicability of OAP NC II to their existing job or career (18.25%), limited land space (15.33%), and poor yield (12.77%). Budhrani et al (2018) found that job-skills mismatch has persisted. The increased hiring standards and demands for extra qualifications, which necessitate more training for the jobs being applied, will make it challenging for graduates to find suitable jobs. The study of Deogracias et al (2019) also supported that there are two reasons why graduates are often forced to take jobs that are not directly relevant to the training. First reason is that there is no work opportunity for the specialization. The second reason is that the compensation offered is not competitive. In addition, the study of Tadle et al (2021) corroborated that the skills of graduates usually acquired were not aligned in their actual work.

For the problem of limited land space, 15.33% of respondents stated that as much as they wanted to engage with organic farming, they did not have adequate land space to be utilized. Poor yield (12.77%) was also considered a problem by most of the respondents who engaged in farming, they claimed that they experienced low yield when they tried organic farming. For having no backup, respondents were afraid if ever it would turn out unsuccessful in converting their farms from conventional to organic. Other problems that arose were organic farming was more laborious (12.04%), expensive when it comes to organic inputs (10.22%), limited supply of organic inputs (9.49%), slow and time-consuming (4.38%).

Organic farming is laborious as claimed by the respondents because it required more capital to meet the labor requirement. As reflected, organic inputs were expensive and insufficient that led them not to follow the required recommended rate. Furthermore, respondents claimed that they found organic farming as slow and time-consuming because according to them it took time to produce organic inputs. The remaining problems mentioned that arose were lack of facility and equipment (4.01%) to utilize for organic farming, lack of clear market and pricing policy (3.65%), lack of additional organic farming exposures (3.28%), lack of technical support from LGUs and other institutions (2.55%), lack of motivation (2.19%), and expensive and complicated certification procedures (1.82%).

Respondents indicated that, in addition to having limited land space, they lacked the necessary facilities and equipment for organic farming. Concerns expressed by the respondents also included the absence of a defined market outlet and pricing strategies for products made organically. Some respondents stated

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that they had no further exposure to organic farming after OAP NC II training. They were unable to receive trainings from local government units and other organizations that would have encouraged them to become more involved in organic farming. The costly and intricate certification procedure for organic products was also brought up as a concern. The respondents could not afford the significant financial capital required for certification. Because there was no label, the respondents could not compete with conventional food products.

Table 4. Problems encountered by the respondents after Organic Agriculture Production NC II training

PROBLEMS* (N=274)	FREQUENCY	PERCENT (%)	RANK
Not applicable to the current job/career	50	18.25	1
Limited land space	42	15.33	2
Poor Yield	35	12.77	3
Organic farming is more laborious	33	12.04	4
Expensive organic inputs	28	10.22	5
Limited supply of organic inputs	26	9.49	6
Organic farming is slow and time-consuming	12	4.38	7
Lack of facility and equipment	11	4.01	8
Lack of clear market and pricing policy	10	3.65	9
Lack of additional organic farming exposures	9	3.28	10
Lack of technical support from LGUs and other institutions	7	2.55	11
Lack of motivation	6	2.19	12
Expensive and complicated certification procedures	5	1.82	13

*Multiple Responses

CONCLUSIONS

Results revealed that majority of the respondents were in the age brackets of 23-34 (42.47%) and 35-45 (30.82%). More than half of the respondents (54.11%) were male, while the remaining 45.89% were female. It resulted that more than half of the respondents (57.53%) were married. In terms of educational attainment, most of the respondents were college graduates (45.21%). Aside from being NC II holders (64.04%), some respondents were PRC license holders (15.35%). In addition to having an NC II (64.04%), 15.35 percent of respondents also held a PRC license. As for employment, there were self-employed (35.62%), unemployed (4.11%), and employed (60.27%). Over half of those who worked (57.95%) was employed for less than 1-6 years, while 39.77% was employed for 1-12 years. For those who were self-employed, 75% of them engaged into farming and the remaining 25% were into non-farming type of business. Majority of respondents (41.78%) were reported with a monthly income ranging from PHP13,000 to PHP19,000.

For problems encountered by the respondents after Organic Agriculture Production NC II training, the most common problems encountered by the respondents were the inapplicability of OAP NC II to their existing job or career (18.25%), limited land space (15.33%), and poor yield (12.77%). Other problems

that arose were organic farming was more laborious (12.04%), expensive when it comes to organic inputs (10.22%), limited supply of organic inputs (9.49%), slow and time-consuming (4.38%). The remaining problems mentioned that arose were lack of facility and equipment (4.01%) to utilize for organic farming, lack of clear market and pricing policy (3.65%), lack of additional organic farming exposures (3.28%), lack of technical support from LGUs and other institutions (2.55%), lack of motivation (2.19%), and expensive and complicated certification procedures (1.82%).

RECOMMENDATIONS

Based on the findings of the study, the following are recommended:

1. Before accepting training participants, learning sites should ensure that participants have a clear objective for future usefulness of the training.
2. Additional organic farming trainings must be provided and enhanced to educate more farmers and address their concerns about adopting organic farming.
3. The government should provide financial assistance and a marketing strategy to farmers who practice organic farming to market their products.
4. Strong collaboration and partnership among Local Government Units (LGUs), academe, private sectors, and other institutions are recommended to come up projects/programs to sustain organic farming.
5. More in-depth research should be conducted in other provinces or regions in the Philippines to gather useful input from OAP NC II graduates who have gained competencies from learning sites.

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