



RRDEN and ViCAARP
CY 2018



Inter-Agency RDE Review
(Agriculture and Fisheries, Environment and Natural Resources)

Extension Project

I. BASIC INFORMATION

Program/Project Title : From the Garden to the Kitchen
Study Title : From the Garden to the Kitchen (FGTK): Capacitating Women on Vegetable Production and Nutrition in Rosario, Northern Samar
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Designation : Center Director, Agricultural Technician, Training Specialist, Monitoring and Evaluation Assistant
Implementing Agency : Agricultural Training Institute - Regional Training Center 8
Cooperating Agency : Municipal Local Government Unit of Rosario, Northern Samar
Funding Agency : Agricultural Training Institute
Budget : Php 200,000
Expenditure(s) : Php 200,000
Duration of the Project : February 2015 – December 2017

Acknowledgement

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- (1) Municipal Mayor, Hon. Gerardo P. Miranda for his support to the project;
- (2) Municipal Agriculturist, Ms. Rebecca N. Pederio, Agricultural Extension Worker, Ms. Rhea P. Tarrayo, and Local Farmer Technician, Gregorio Pelonia, for implementing the project in their municipality;
- (3) Mr. Dalmacio L. Pajanustan, Ms. Ermalinda B. Cayago, Mr. Nilo Marquito, for supervising and acting as training facilitators;
- (4) Project beneficiaries for actively participating in the project; and
- (5) Resource persons for sharing their knowledge and skills during the training.

Abstract

This project was implemented to improve the availability of vegetables in the municipality of Rosario by encouraging the residents to raise vegetables in their backyards and adopt organic home gardens in the household. The project aimed to increase harvest/yield and income of the household and hoped to contribute to the reduction of malnutrition incidence among the children, ensure food availability and also environment conservation.

The project was implemented in the 11 barangays of Rosario, Northern Samar in 2015-2017 with 75 beneficiaries. The strategies employed were consultation with the local government units and participants, launching of the project, commitment signing by the participants, local government officials and extension workers and ATI, conduct of training, provision of after training support such as vegetable seeds, seedlings and seed tray, conduct of harvest festival and monitoring.

The data revealed the following findings: (1) all of the project beneficiaries have established and improved their gardens in their backyards. (2) They applied the technologies taught to them such as the appropriate seeding and planting, adopting the 3Rs (reuse, reduce recycle) by using recyclable materials as their plant holders such as plastic bottles, empty seed containers, used sacks and others. (3) All of them used bio-organic inputs (composts, carbonized rice hull, etc.) as their fertilizers and is marketing their produced vegetables. (4) The most common planted vegetable is eggplant (69.4%) and the least one is radish (0.7%). At present, the beneficiaries raised an average of 8 types of vegetables. (5) Results also showed that there is an increase between the level of knowledge of the training participants before and after FGTK. It can be seen that the respondents are now adopting technologies from all of the topics that were taught to them. All of them are now using the planting techniques on herbal and vegetable production that is imparted to them. They are also applying their knowledge on the types and uses of herbs and vegetables and its pest and diseases management. Also on the approaches, determinants, and advantages of organic agriculture and the urban gardening technology or agritecture. (6) All of the

beneficiaries have their own gardens and produced an average increase in yield by 67 kg/per cropping. Now, their gardens produced mean yields of about 98 kg/cropping, which is much higher than their mean yield of about 31 kg/cropping before the project implementation. (7) Additionally, more than one half (64%) of the beneficiaries are now earning income ranges from Php 5001 and above. Before the project, beneficiaries had a mean income of about Php 4,652 and has an increase in income of about Php 2,344 after the implementation. They are now earning a mean income of about Php 6,996 per month. (8) Also, as an effect of fresh and safe vegetables available in the backyard, there are no longer malnourished children in their households. (9) Moreover, additional 10 batches were conducted by the ATI-RTC 8 on other municipalities last 2017 and on the 1st semester of 2018. Moreover, two of the 75 beneficiaries are now trainers of their co-farmers resulting to the conduct of training of the second and 3rd batches with the extension worker. It is also good to note that almost each of the beneficiaries was able to influence their neighbor to establish their own gardens and adopted the 3Rs.

Since this project yielded significant results, proper and continuous monitoring shall be practiced to ensure good implementation of the project. Enough provision of seeds and planting needs (water sprinkler, garden shovel, net, plastic mulch, acquiring own water source/irrigation, etc.) shall be given to the beneficiaries and to the additional batches. Regular monthly meeting shall be conducted to address problems encountered immediately. Additionally, all batches shall be capacitated more and shall be exposed to more develop and modernized farms. They should also be provided with trainings on food processing.

II. TECHNICAL DESCRIPTION

Rationale

People living in poverty have less access to safe and highly nutritious foods. Poverty and food security are intricately intertwined. Without resources to grow food, people are likely to become ill and unable to work to produce food or earn an income. With this scenario, the government has initiated much effort and innovation in order to sustainably increase agricultural production, improve supply chain, decrease food losses and wastage, and ensure that all who are suffering from hunger and malnutrition have access to nutritious foods.

One key strategy is the mobilization of local households geared towards a community-centered and sustainable nutrition project. This will also enable them to create their own demand for available and nutritious foods and have a strong sense of ownership of a development project.

Hence, the ATI-RTC 8's "From the Garden to the Kitchen" seeks to respond to the community's need for safe, chemical-free, nutritious and affordable food for the family of rural-based organization. The project also empowers small farmers, contributes to poverty alleviation and a healthy lifestyle.

III. Theoretical/Conceptual Framework

The framework indicated that inputs such as manpower, money, machinery, methods and time are necessary and sufficient to implement outlined activities to deliver the expected outputs of the project in which the project management is accountable. Logically, interventions conducted particularly the consultation and launching resulted to the confirmation and show of commitment to the project by the Local Chief Executives, extension workers and the identified beneficiaries. The conduct of training by the ATI RTC 8 and the Office of the Municipal Agriculturists produced 89 and 2 trained women and men, respectively. Provision of technical advisories and learning journey also resulted to the improvement of the home gardens while the conduct of harvest festival provided the beneficiaries with the experience of selling and marketing their products. Monitoring was also conducted by the extension worker and ATI staff to ensure that technologies were adopted by the beneficiaries and problems identified and resolved.

The delivery of these outputs led to increased knowledge, skills and attitudes of the clients that enabled them to establish and improve their home gardens and adopted most of the technologies introduced to them. This resulted to increased productivity in terms of yield and income. It also led to the reduction of malnutrition cases to beneficiaries with children who were initially malnourished before the project. These outcomes also resulted to increase number of clients turned into mentors and agripreneurs who had influenced their neighbors to also establish their own home gardens. With the achievement of the desired outcomes, the project hopes to contribute to food availability and environment conservation.

INPUTS

Inputs
Manpower
Money
Machinery
Time

OUTPUTS

1.) Commitment and confirmation of the LGU and beneficiaries
2.) Trained beneficiaries

EFFECTS

Improved KSA
Adopted and established their own gardens
Improved and increased the volume of the vegetable raised
Adopted the 3Rs, (reduce, reuse, recycle)

Consultation, launching
Training
Technical Advisories
Provision of after training support
Harvest Festival

OUTCOME

Increased productivity
Reduced malnutrition incidence

IMPACT

Ensured food security
Conserved environment

Figure 2: Schematic diagram showing the outcome of From the Garden to the Kitchen Project to the household beneficiaries

Objectives

This project was implemented to increase the availability of vegetables in the municipality of Rosario by encouraging the residents to raise vegetables in their backyards and adopt organic home gardens in the household. Specifically, the project aimed to capacitate the clients to increase harvest/yield and income of the household and hoped to contribute to the reduction of malnutrition incidence among the children, ensure food availability and also environment conservation.

IV. REVIEW OF LITERATURE

According to the Food and Agriculture Organization, “the Philippines has the highest prevalence of food inadequacy among Asia’s tiger cub economies” from 2005-2012. (Rodriguez, 2015) The poorest and marginalized living in the rural are the most affected and women and children are often times the victims. Environmental degradation, water shortages, lack of resources and inappropriate agricultural policies are some of the factors why many regions suffer from food insecurity. Household food security exists when all members of the household at all times, have access to adequate food for a dynamic and healthy life. (Mapa et.al, 2010) Generally, those severely affected are the women and children living in the rural areas mostly in conflict-affected areas and disaster-affected communities mostly in Eastern Visayas. (Focus on the Global South - Philippines, 2015)

After typhoon Yolanda devastated Eastern Visayas in 2013, a 52% self-rated food poverty was noted. The UN World Food Programme corroborates this study when in February 2014, they documented that 27% of the population in Yolanda-affected areas remained food insecure. These areas are also where poverty incidence is much higher than the national average. (Focus on the Global South - Philippines, 2015)

In a fifth class municipality similar to Rosario in the province of Northern Samar, agriculture and nutrition are two most important issues that need to be given importance to improve the quality of life of the rural poor in the municipality. With a population of 10,520 (2015), it is subdivided into 11 barangays with 26.6% unemployment rate and poverty incidence of 56.2%. (PSA, 2016)

Agriculture is the primary source of income of the rural poor and majority of them depend on subsistence farming and fishing. In a municipality with low investment in agriculture (300/year) it is not likely to have large area for vegetable production to provide enough food consumption in the whole community. (Ezzati et al., 2002) Since there is lack of enough food to meet the needs

of all the household members, as well as lack of money and other resources, 258 cases of malnutrition was recorded last 2015 as stated in the Barangay Nutrition Scholars Report of Rosario, Northern Samar. Contributing to these cases is the insufficient supply of vegetables in the municipality.

Moreover there is no guarantee of safe and nutritious vegetables in the market. Most of the residents of Rosario bought their vegetables from the municipality of Catarman which is approximately 45 to one hour drive from Rosario. This resulted to higher expenditures of the household and poor quality of vegetables.

With the above scenario, the health of the households especially the children cannot be placed sideline. There is a need for the government to embark on a community-based and nutrition sustainable programs to help address food unavailability and safety issues. This is to ensure enough and healthy food by improving food production which will contribute to food security. One major strategy is to mobilize the rural women and capacitating them to engage in vegetable farming through backyard or container gardening.

Hence, an extension project dubbed as “From the Garden to the Kitchen: Capacitating Women on Vegetable Production and Nutrition”, was designed by DA-ATI 8 and LGU Rosario which capacitates women on household food production. These gardens are intended to increase the supply of sources of low-cost food rich in nutrients even in containers to attain household food security and nutrition.

V. METHODOLOGY

Location Where the Project Was Implemented

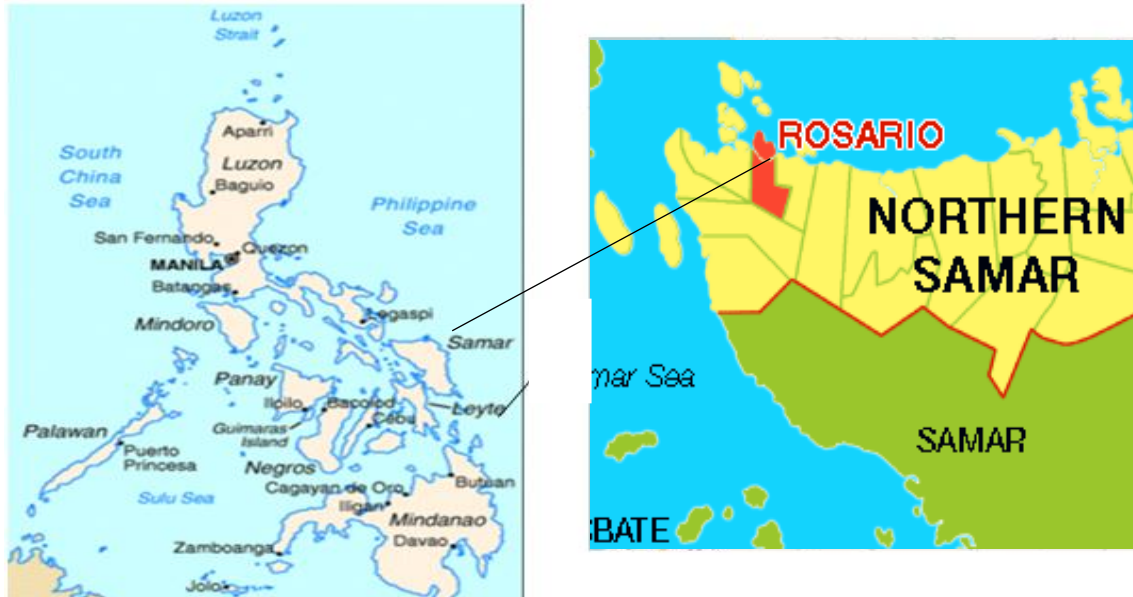


Figure 1. Location map of Rosario, Northern Samar

This project was implemented in selected barangays of the municipality of Rosario, Northern with 75 beneficiaries from 11 barangays as indicated below in 2015-2017 as reflected on Table 1.

Table 1. Number of beneficiary households in each barangay in Rosario, Northern Samar (2015-2017)

Barangays	Number of Beneficiaries
Aguada	4
Bantolinao	8
Buenavista	7
Commonwealth	12
Guindaulan	5
Jamoog	2
Ligaya	2
Poblacion	4
Poblacion 2	2
Salhag	6
San Lorenzo	23
Total	75

Extension Implementing Strategies

The project employed a number of extension strategies to deliver the desired outputs and outcome of the project.

1) *Needs Assessment/Consultation*

This project was conceptualized after the Office of the Municipal Agriculturist and the Local Chief Executive raised the recurring problem of unavailability and high price of vegetables and malnutrition cases in the municipality. They lamented that the residents of the municipality of Rosario have to buy their vegetables in Catarman which is a one-hour drive from Rosario. They also mentioned that they are also unsure if the vegetables are safe. Likewise, some of the vegetables they bought from Catarman are not anymore fresh especially the leafy ones when they arrived in their respective houses.

Hence, the request for technical assistance from ATI RTC 8. During the initial meeting of ATI RTC 8 and the LGU, it was also presented that there are interested women who would like to engage in backyard gardening and would like also to improve the gardens for those women who already have. With the women's enthusiasm to join in this homegardens extension project and with the support and encouragement of the Local Chief Executive coupled with the very active and committed extension workers, this project was conceptualized.

2) *Launching of the Project*

The project was formally launched with the participation of the homegarden enthusiasts who were mostly women, LGU officials, Municipal Nutrition Office (MNO), Office of the Provincial Agriculturists (OPA) and Office of the Municipal Agriculturist (OMA) and municipal officials. The launching was done to explain the purpose of the project, roles of each of the recipient, LGU, OPA, MNO and ATI RTC 8. Commitment signing followed to ensure the support of each of the participating stakeholder.

3) Capacity Building

Seminar/trainings on backyard gardening was conducted. The training employed both lecture and actual hands-on activities. Specifically, the participants were taught how to make concoctions, carbonized rice hull, seeding techniques and use of recyclable materials such as plastic bottles as plant holders and in landscaping. Other trainings were also provided to them such as Climate Smart Farm Business School, a market-oriented extension approach to teach them to become entrepreneurs. Farm planning, record keeping and marketing were given emphasis during the training. The recipients were also trained on meat processing with technical and financial assistance from ATI.

4) Learning Journey

This is an extension activity implemented by ATI to its clients to visit various farms for them to do some benchmarking and learn technologies and best practices from the farm. The project beneficiaries were given the opportunity to participate in the learning journey to other farms. They visited the ATI certified Learning Sites and School of Practical Agriculture such as Pedroso Farm in Calbayog, La Granja in Bagacay, Tacloban, Bendicar Farm in Sogod and Gold Farm in Can-ipa, Baybay. These farms showcased technologies and the farmer-owner shared their best practices to the farmers, students, pupils, youth, women, tourists, overseas Filipino workers and others visiting their farms. They learned various technologies such as jackfruit production, integrated organic vegetable production, rice farming, livestock and poultry raising and farm tourism. They also visited ATI RTC and were briefed on ATI RTC 8 extension programs. Campus tour in VSU was also provided to the project beneficiaries.

5) *Technical Advisories/Mentoring/Coaching*

Aside from ATI staff who provided technical assistance to the project beneficiaries, Local Farmer Technicians assigned in the municipality with the extension worker also mentored and coached them on nutrition and value adding particularly on making pastillas and baked macaroni using squash. They were also oriented about preparation of food from their harvest for their children especially during meetings. The beneficiaries continue to make “puto” and “pakumbo” from squash with flour and sugar.

6) *Harvest Festival and Agri-Fair During Nutrition Month Celebration*

The project beneficiaries also conducted harvest festival and Agri-Fair where they sell their vegetables raised in their homegardens during Nutrition Month celebration in collaboration with barangay officials. Their products were also sold to other homegarden enthusiasts within and outside the municipality especially the garlic. They applied what they learned from Climate Smart Farm Business School particularly on farm planning and marketing. Aside from the income that they obtained, the beneficiaries had a sense of fulfillment once their products were all sold.

7) *Bayanihan*

This activity was conducted during the 2nd phase of the project implementation. This was participated by all the beneficiaries who went to other barangay to help establish a communal garden. They brought seedlings, garden tools, food or snacks. In fact, one Peace Corp volunteer from Australia joined them where she appreciated the project. They also helped co-beneficiaries in establishing their homegardens when these were flooded and washed out during the Typhoon Nona.

8) Provision of After Training Support

Agricultural inputs such as vegetables seeds, cuttings, seeding tray and other needed materials were provided to the beneficiaries. After ATI, the beneficiaries were provided with seeds and other farm inputs from the OMA and OPA.

9) Monitoring and Evaluation

Monthly meeting was conducted by the LGU OMA together with the Nutrition Scholar and Local Farm Technicians. Issues and challenges met by the beneficiaries were discussed. Possible interventions were also identified and sharing of best practices was also done. ATI RTC staff also monitored and evaluated the project twice a year and obtained good results and feedback from the beneficiaries

Sustainability Scheme and Empowerment

LGU

The LGU was very eager to sustain the project by expanding the project to other barangays. The LGU continues to provide support in fact it is already included in their regular program with corresponding budget. They also planned to conduct a competition per barangay. Three (3) of the beneficiaries were also empowered as trainors and resource persons. They were also tapped by the Department of Social Welfare and Development in their family development sessions of the 4Ps.

Data Collection

To determine the effect or outcome of the training both primary and secondary data were obtained. The list of the beneficiaries of "From the Garden to the Kitchen Project" is the secondary data that was from the office of the Agricultural Training Institute – Regional Training Center 8 (ATI-RTC 8) for the 1st batch and from LGU – Rosario for the 2nd and 3rd batch. This list was used for gathering

the primary data, which was collected through an interview using a structured questionnaire. The data on nutritional status was taken from the Municipal Nutrition Office.

Data Analysis

Descriptive statistics were used to characterize the effects of organic container gardening through From the Garden to the Kitchen Project on the socioeconomic development of selected beneficiaries and their household in Rosario, Northern Samar. The study used means, totals, frequencies, and percentages to analyze qualitative and quantitative data.

VI. RESULTS AND DISCUSSION

1) Socio-economic Profile of the Project Beneficiaries

One of the concerns of the study is to obtain information describing the socio-economic profile of the beneficiaries of a project. This part discusses the selected characteristics that may influence on the success of a project that has been made. The socio-economic factors that were used in the analysis were age, civil status, educational attainment, lot ownership, house ownership, household size, and sources of income. The beneficiaries were from 3 batches. The first batch was conducted by the ATI-RTC 8. The other two batches was a re-echo demonstration conducted by the LGU-Rosario.

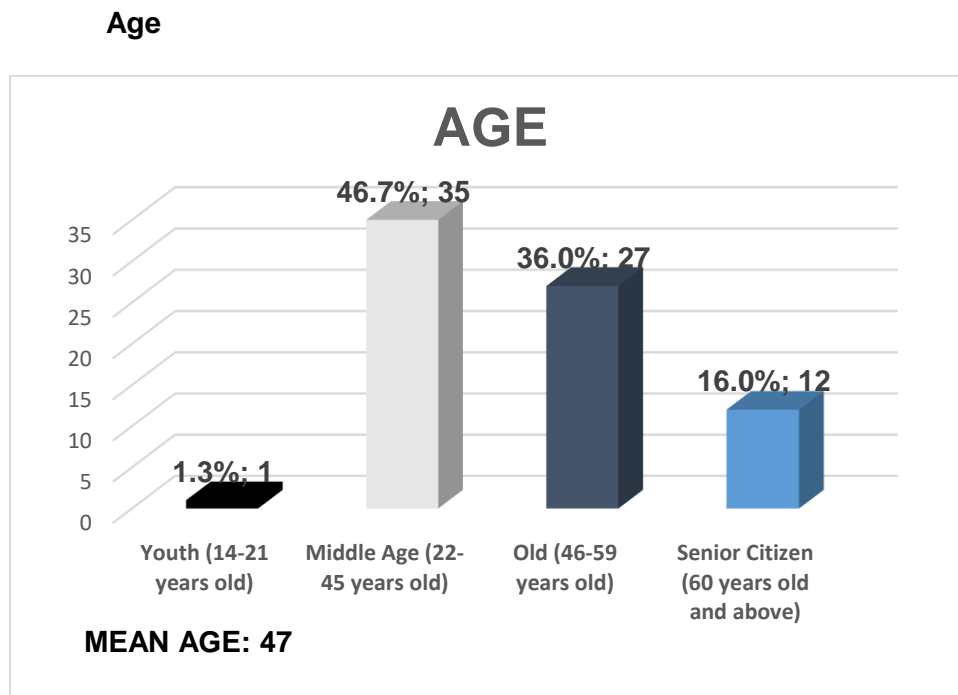


Figure 2. Age of the project beneficiaries

A total of seventy five (75) training participants participated in the study. Mean age of beneficiaries is 47 years old. Almost one half (46.7%) belonged to the middle age bracket (Fig. 2). At this range, most people want to assure safe and nutritious food to eat and also an adequate and inexpensive supply of vegetables.

Civil Status

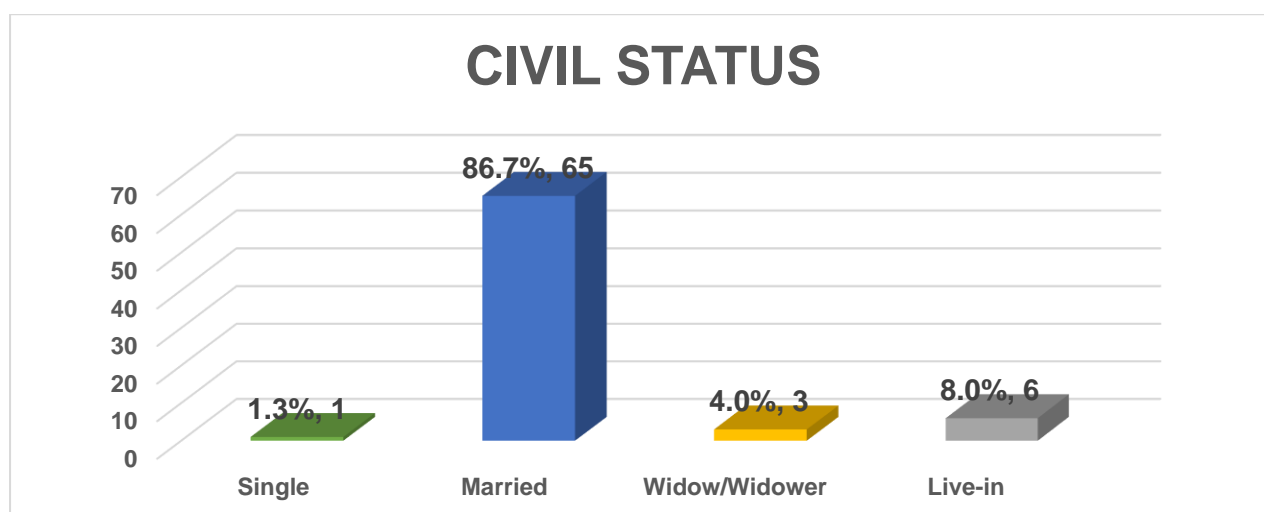


Figure 3. Civil status of project beneficiaries

Sixty five of the beneficiaries or 86.7% were married with an average of five (5) children in a household (Fig. 3). This suggests that married people are more willing to engage in organic container gardening for them to serve safe and fresh vegetables to their families and to avoid malnutrition cases among their children in their household. Moreover, it also increase their family income.

Educational Attainment

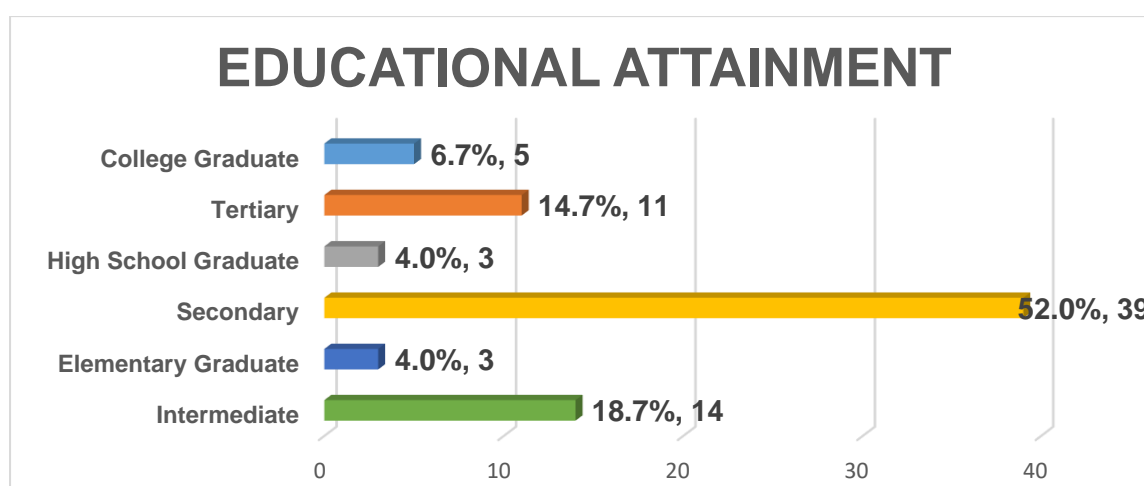


Figure 4. Educational attainment of project beneficiaries

As shown in Figure 4, most of the beneficiaries were not able to go to college. More than one half or 52% of the beneficiaries were on the secondary level and did not able to finish high school. Not being sent to school in a continuous manner by the parents/guardians might be the reason for it. Instead of going to school, some of them might have chosen to give up/sacrifice their studies to earn a living for them to help their parents for the family needs.

Lot Ownership

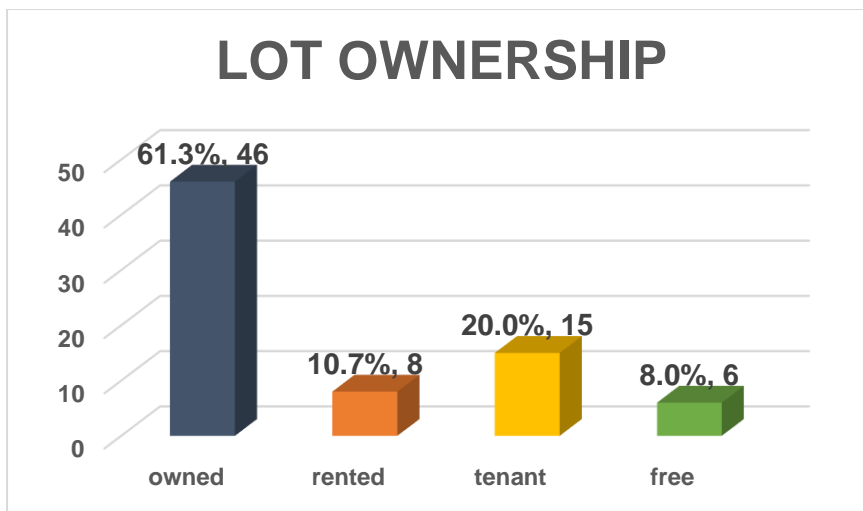


Figure 5. Residential lot ownership of project beneficiaries

Forty six or 61.3% of the beneficiaries own their residential lots as shown in Figure 5, while the rest of the beneficiaries were settlers with no legal title to the land occupied (tenant, rented, and rent free). Beneficiaries who own their lots are more motivated to practice organic container gardening on their backyards compared to the other beneficiaries who did not own their residential lot.

House Ownership

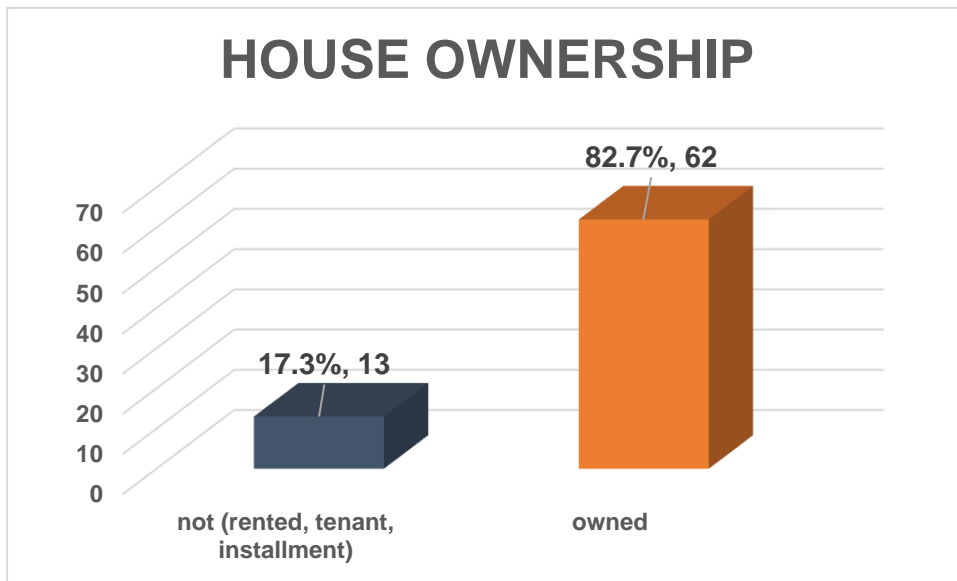


Figure 6. House ownership of project beneficiaries

As shown in Figure 6, only 13 or 17.3% of the beneficiaries did not own their houses while 82.7% lived at their own houses. Presumably house ownership reflects households' economic status.

Household Size

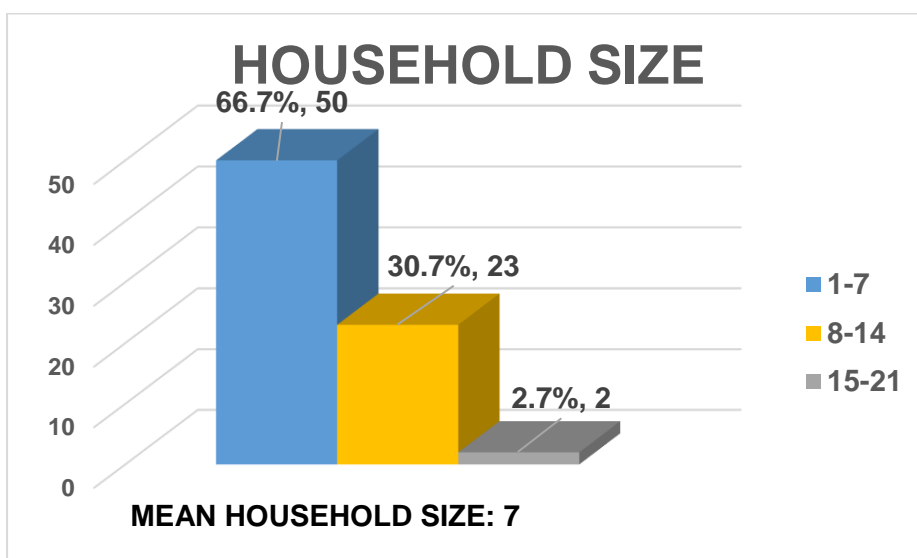


Figure 7. Household size of project beneficiaries

The distribution of household size is shown in Figure 7. More than one-half (66.7%) of the households are composed of a maximum of 7 members which is represented by 50 households. This household size is usually represented by a married couple having one to five children. Possibly, the more members a family has, the more that the respondent is encouraged to do container and/or backyard gardening to have a fresh and sufficient supply of vegetables to be served for her family.

Sources of Income

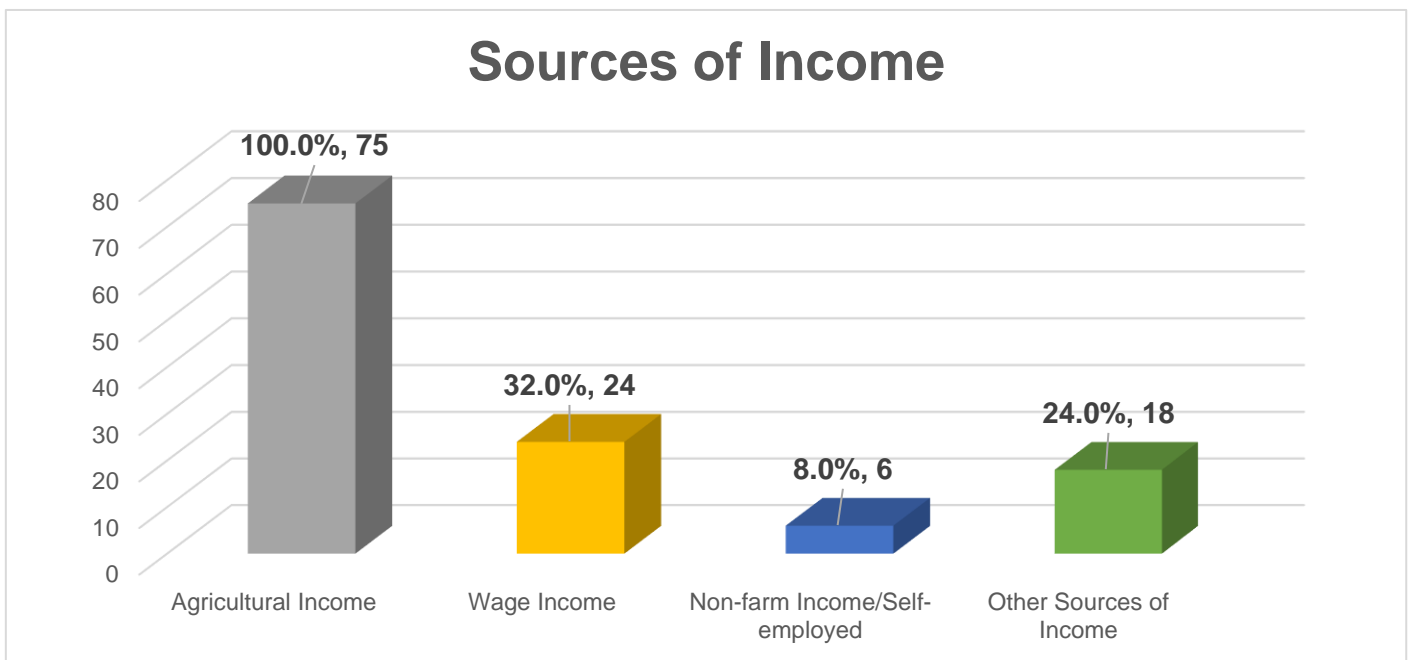


Figure 8. Sources of income of project beneficiaries

Sources of income are used as a determinant in knowing how much money a household earns. Having multiple sources of income does not always mean that a household or an individual earns more than those who only have single source of income. Figure 8 shows the sources of income of the beneficiaries.

Agricultural income is the primary income source of the beneficiaries. All of them rely on farming, vegetable gardening, corn farming, copra, abaca weaving, tuba gathering, charcoal making, swine raising and fishing. Twenty four or 32% of them receives earned wages from working as laborers and service workers. The remaining 24% derived their income from being a self-employed or from non-farm income (remittance, official's honorarium, and income from being a government official/employee). On the other hand eight percent of the beneficiaries are also relying on other sources of income, like from their pensions and as a 4P's beneficiary. As shown on the result, we can assessed that all of them are practicing vegetable gardening.

2.a) Level of Knowledge

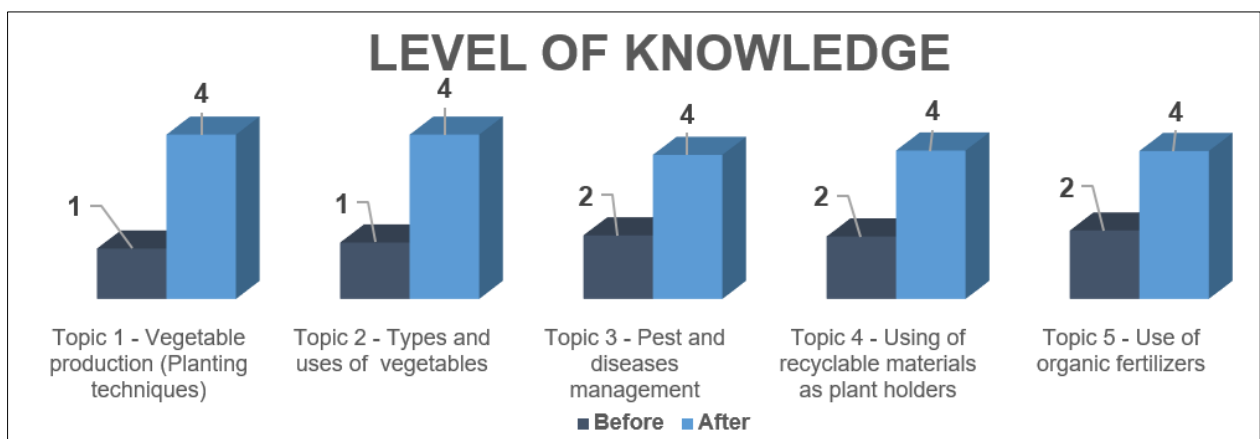


Figure 9. Level of knowledge of the respondents to the topics taught in the training

The level of knowledge of the training participants on the main topics discussed during the training were assessed using the rating scale: 1 for obliviousness (no knowledge about the subject); 2 for cognizant (heard the subject but has no knowledge about it); 3 for understanding (has knowledge about the subject); 4 for engaged (practiced or involved); and 5 for expertise (has been practicing or has authority in it). The respondents rated 5 topics discussed during the training.

Figure 9 shows the average responses of the respondents in each topics discussed during the training.

Before the project, the average response on topic 1 and 2 is 1 or obliviousness (no knowledge about the subject) and 2 or cognizant (heard the subject but has no knowledge about it) on topic 3 to 5. But after the project, their knowledge on the 5 topics increased to 4 or engaged (practice or involved). One hundred percent of the beneficiaries had an increased on knowledge and were now adopting the techniques taught to them.

Results show that there is an increase between the level of knowledge of the training participants before and after FGTK. It can be seen that the respondents are now adopting on all of the topics that were taught to them. All of them are now using the planting techniques on vegetable production that is imparted to them. They are also applying their knowledge on the types and uses of herbs and vegetables and its pest and diseases management. Also on the approaches, determinants, and advantages of organic agriculture and the urban gardening technology or agriculture.

2.b) Level of Adoption

Number of Beneficiaries with Garden

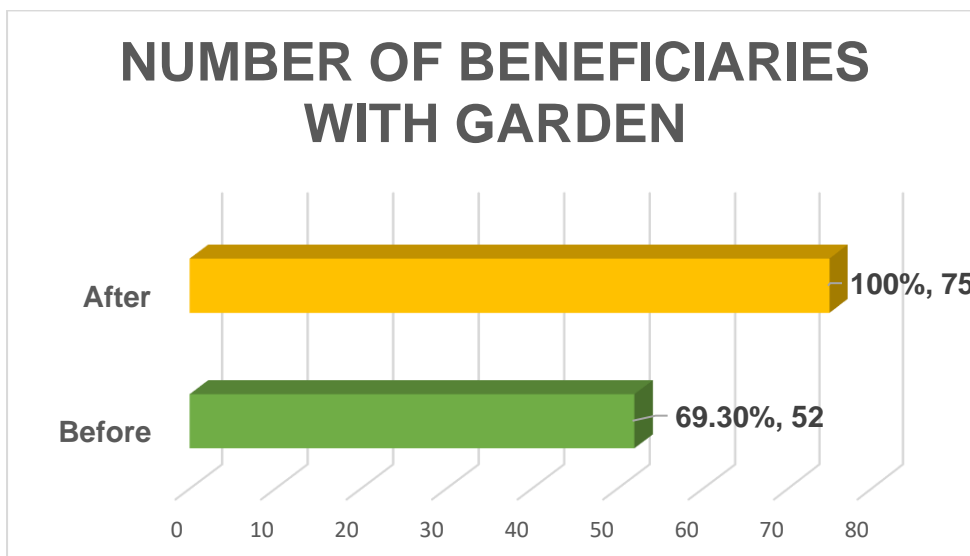


Figure 10. Number of Beneficiaries with garden before and after the project implementation

Fifty-two or 69.30% beneficiaries out of 75 have on-going established home gardens before the project. After the implementation, all (100%) of the beneficiaries cultivated their home gardens.

The testimony of Ms. Matilda Pestanio, 36 years old from Poblacion, Rosario, Northern Samar stressed that establishing their home vegetable gardens and applying what they learned after the training resulted to changes in their buying behavior and harvest from the garden. They can also assure that the vegetables they are consuming which are already available in their gardens are safe and nutritious.

Types of Vegetables Grown

Table 2 below presents the summary of types of vegetables raised by the project beneficiaries. The most common planted vegetable is eggplant (69.4%) and the least one is radish (0.7%). At present, the beneficiaries raised an average of 8 types of vegetables.

Table 2: Types of vegetables grown

Vegetables Grown	Before		After		Total	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
bitter gourd	25	33.3	53	70.7	78	52.0
bottle gourd	18	24.0	43	57.3	61	40.7
carrots	0	0.0	4	5.3	4	2.7
chili	16	21.3	25	33.3	41	27.3
climbing spinach	1	1.3	3	4.0	4	2.7
cucumber	2	2.7	22	29.3	24	16.0
eggplant	39	52.0	65	86.6	104	69.4
horseradish	1	1.3	20	26.7	21	14.0
lady's finger	41	54.7	61	81.3	102	68.0
lettuce	2	2.7	15	20.0	17	11.3
mung bean	0	0.0	3	4.0	3	2.0
mustard	1	1.3	4	5.3	5	3.3
radish	0	0.0	1	1.3	1	0.7
savoy cabbage	10	13.3	42	56.0	52	34.7
sponge gourd	3	4.0	6	8.0	9	6.0
squash	19	25.3	40	53.3	59	39.3
string beans	33	44.0	65	86.7	98	65.3
sweet pepper	4	5.3	31	41.3	35	23.4
tomato	11	14.7	34	45.3	45	30.0
water spinach	2	2.7	23	30.7	25	16.7
winged bean	2	2.7	4	5.3	6	4.0

Fertilizer Used

The summary of fertilizers used by the project beneficiaries for vegetable production is shown in table 3 below which indicates that they adopted the technology on fertilizer use taught to them during the training. The most common fertilizer used is carbonized rice hull (61.1%) and the least ones are FPJ and IMO (2.7%).

Table 3: Organic Fertilizers Used for Vegetable Production

Organic Fertilizers Used	Count	%
Animal manure	10	13.3
Bio fertilizer	3	4.0
Carabao manure	6	8.0
Carbonized rice hull	46	61.1
Chicken dung	5	6.7
Compost	42	56.0
CRH	4	5.3
FFJ	3	4.0
FPJ	2	2.7
IMO	2	2.7
OHN	6	8.0
Total	75	100.0

2.c) Adopted Techniques

As shown in table 4, all of the project beneficiaries are now planting vegetables in their surroundings and are also laying out their gardens. Seventy five or 100% of them are using recyclable materials as holders of their vegetables and are applying the proper ways of transplanting the seedlings. Moreover, all of them are using organic fertilizers and are now earning additional income from marketing their produced vegetables.

Table 4: Adopted Techniques

Adopted Techniques	Count	Rank
Lay outing and planting	75	1
Transplanting of seedlings	75	1
Use of recyclable materials as plant holders	75	1
Using organic fertilizers	75	1
Marketing of Vegetables	75	1
Soil medium preparation	69	2
Making of carbonized rice hull	68	3
Preparation of natural farming inputs/bio fertilizers	67	4
Urban gardening	66	5
Common diseases identification and medication	64	6
Record Keeping	56	7
Other organic farming techniques	25	8

Additional FGTK conducted

The FGTK in Rosario, Northern Samar is an inspiration for the ATI-RTC 8 to institutionalize the From the Garden to the Kitchen in the region. Additional batches were conducted in 2017 and on the 1st semester of 2018 in (1) Tunga, Leyte; (2) Carigara, Leyte; (3) Sto. Niño, Samar; (4) Lawaan, Eastern Samar; (5) Guiuan, Eastern Samar; (6) Balangkayan, Eastern Samar; (7) Borongan, Eastern Samar; (8) Mondragon, Northern Samar; (9) Bobon, Northern Samar; and (10) Catarman, Northern Samar. A total of 336 participants were trained on these batches.

Table 5 below shows the list of municipalities wherein additional batches of From the Garden to the Kitchen was conducted and its corresponding number of participants last 2017 to 1st semester of 2018.

Table 5. List of Municipalities wherein FGTK was conducted (2017-1st semester 2018)

Municipalities	Number of Participants
Tunga, Leyte	35
Carigara, Leyte	30
Sto. Niño, Samar	32
Lawaan, Eastern Samar	30
Guiuan, Eastern Samar	31
Balangkayan, Eastern Samar	28
Borongon, Eastern Samar	30
Mondragon, Northern Samar	60
Bobon, Northern Samar	30
Catarman, Northern Samar	30
Total	336

3) Estimation of Effects

3.a) Average Yield per Cropping in Kilogram

An increase in yield is one of the expected returns when investing into agricultural projects. Before the implementation of the project, 23 of the beneficiaries out of 75 don't have their own gardens and were not able to obtain vegetable yield. After the project implementation, all of the beneficiaries have their own gardens and produced an average increase in yield by 67 kg/per cropping. Now, their gardens produced mean yields of about 98 kg/cropping, which is much higher than their mean yield of about 31 kg/cropping before the project implementation.

Table 6: Average vegetable yield per cropping in kilograms

Average Yield on Vegetable Production	Before		After	
	Frequency	Percentage	Frequency	Percentage
0	23	30.7	0	0.0
1-100	50	66.7	55	73.3
101-200	0	0.0	16	21.3
201-300	2	2.7	1	1.3
301-400	0	0.0	1	1.3
401-500	0	0.0	2	2.7
Mean		31		98
Total	75	100.0	75	100.0

Luz Sinocbit, 49 years old, Brgy. San Lorenzo, shared her appreciation of the project regarding her harvest from her garden. She said “I have learned many things because of ATI’s help. Even though my garden has not been applied with synthetic fertilizers but with compost and carbonized rice hull which we learned from the training, I can still harvest enough for the day and could feed my family”.

Total Monthly Income

Most of the projects commonly aimed to increase income of their target beneficiaries. As shown in the table below, more than one half (64%) of the beneficiaries are now earning income ranges from Php 5001 and above. Before the project, beneficiaries had a mean income of about Php 4,652 and has an increase in income of about Php 2,344 after the implementation. They are now earning a mean income of about Php 6,996 per month.

Table 7: Average monthly income of the household

Average Monthly Income	Before		After	
	Frequency	Percentage	Frequency	Percentage
0-1,000	8	10.7	1	1.3
1,001-2,000	7	9.3	0	0.0
2,001-3,000	17	22.7	7	9.3
3,001-4,000	12	16.0	11	14.7
4,001-5,000	11	14.7	8	10.7
5,0001 and above	20	26.7	48	64.0
Mean		4,652		6,996
Total	75	100.0	75	100.0

Income on Vegetable Production

Before the project implementation, majority of the beneficiaries (86.7%), are earning income on vegetable production ranges from 0 - 1,000 Php. At present, all of them has an increase in income on vegetable production. They are now earning income ranges from 2,001- 5,001 Php and above. This implies that through organic vegetable gardening, the income of the beneficiaries’ increases

from a mean income of 476 Php before the project to a mean income of about 2,451 Php after the implementation.

Table 8: Average monthly income on vegetable production

Income on Vegetable Production	Before		After	
	Frequency	Percentage	Frequency	Percentage
0-1,000	65	86.7	18	24.0
1,001-2,000	6	8.0	26	34.7
2,001-3,000	3	4.0	14	18.7
3,001-4,000	1	1.3	5	6.7
4,001-5,000	0	0.0	6	8.0
5,0001 and above	0	0.0	6	8.0
Mean		476		2,451
Total	75	100.0	75	100.0

Accounts also of the project by some of the participants are generally telling that they earned income from selling vegetables from their home gardens.

“I can sell and get capital from my planted vegetables. I base the pricing of my products from the standards of the market. For example, I sell my bitter gourd of 5 kilos for P200.00. I can sell my vegetables, feed my family and help them”. This is according to Irene Balicud, 45 years old of Brgy. Guindaulan.

Vicky de Asis, 52 years of Brgy. San Lorenzo also said “Our income helped us buy food, coffee, rice, fish and more.

Number of Vegetables Grown

An average of 3 types of vegetables were raised by the beneficiaries before the project and raised an average of 8 types of vegetables after the implementation. Almost one half of the beneficiaries (45.3%) are planting 1-5 types of vegetables before the project while at present, majority of them (60%) are now cultivating 6-15 types of vegetables.

Table 9: Number of Vegetables Grown

Number of Vegetables Grown	Before		After	
	Frequency	Percentage	Frequency	Percentage
0	22	29.3	0	0.0
1-5	34	45.3	12	16.0
6-10	17	22.7	45	60.0
11-15	2	2.7	18	24.0
Mean		3		8
Total	75	100.0	75	100.0

Nutritional Status

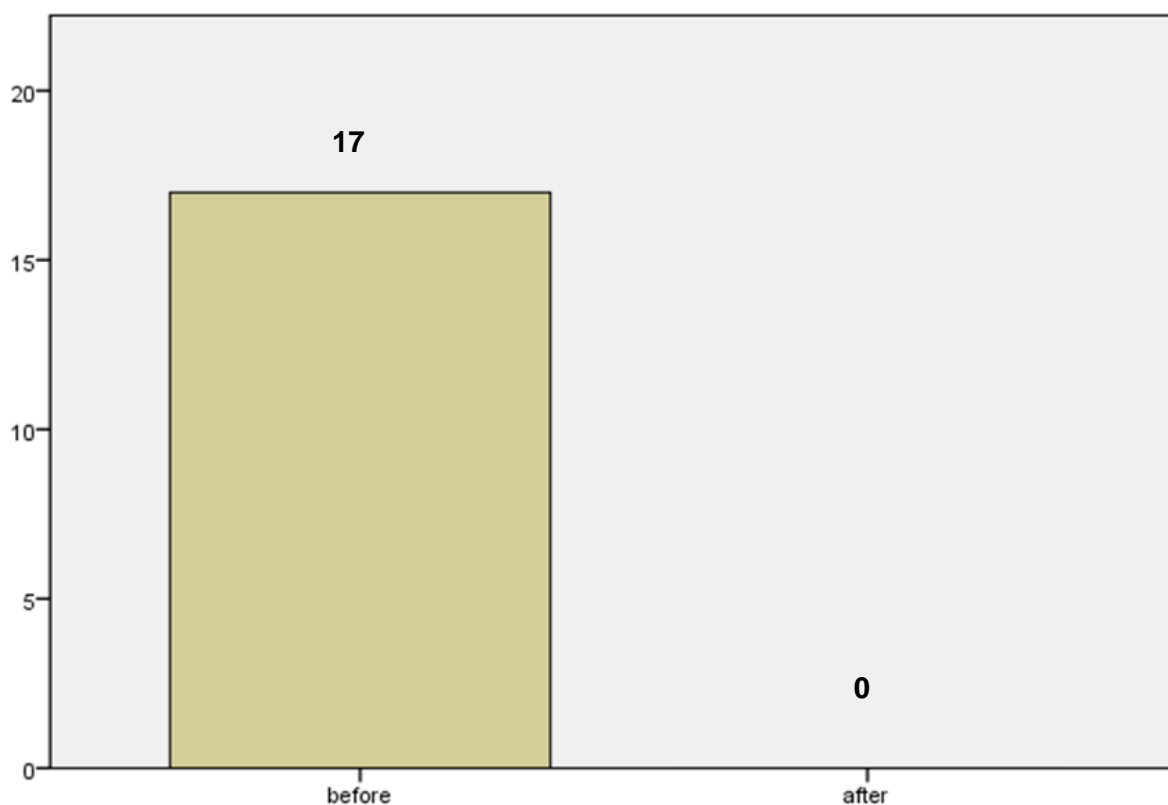


Figure 11. Number of malnourished children on the household of project beneficiaries

About seventeen (17) malnourished children (underweight, severely underweight, and overweight) out of 75 beneficiaries were recorded before the project. After the intervention, no cases of malnourished children were reported among the household of the project beneficiaries. Fresh and sufficient supply of vegetables are now available at their backyards, as a result, the mothers, who were recipients of the project, cooked and served the food to their children. Thus, organic vegetable gardening brought positive effects on the nutritional status of the children in Rosario, Northern Samar.

Problems Met

Beneficiaries met different problems in the implementation of the project. The problems mentioned by the beneficiaries were (1) lack of seeds and its fast mortality; (2) inadequate water supply; (4) adverse weather condition; (5) uncontrollable pests and diseases; and (6) lack of garden tools (water sprinkler, garden shovel, net, plastic mulch, etc.).

Assessment about the Project

One local farmer technician who helped in the implementation of the project and was also one of the resource person in the succeeding training after he attended the first training funded by ATI also appreciated the relevance of the project. He said that: "Before, there was really nothing. But now, the project helped us not only in the family but we also gain income by selling vegetables to others. In my observation, "From the Garden to the Kitchen" isn't really that hard to do because it is accessible in our backyard. Since, it is accessible, the vegetables we grow will definitely go to our plates". This is according to Gregorio Pelonia, local farmer technician, 40 years old of Poblacion, Rosario, Northern Samar.

VI. SUMMARY, CONCLUSION AND RECOMMENDATION

The project on the backyard organic container gardening demonstrated effectiveness on the following: (a) increasing average vegetable yield per cropping; (b) increasing monthly average income by marketing their surplus vegetables produced; and (c) reducing number of malnourished children in the household of the beneficiaries.

At present, all of them have established and improved their gardens in their backyards. They adopted the technologies taught to them and 100% used recyclable materials as their plant holders. Moreover, all of them used bio-organic inputs (composts, CHR, etc.) as their fertilizers and are marketing the surplus of their vegetables.

Since, this project yielded significant results, additional 10 batches were conducted by the ATI-RTC 8 on other municipalities last 2017 and on the 1st semester of 2018. Some of these trainings were requested by the LGU and extension service provider (ESP).

Proper and continuous monitoring shall be practiced to ensure good implementation of the project. Enough provision of seeds and planting needs (water sprinkler, garden shovel, net, plastic mulch, acquiring own water source/irrigation, etc.) shall be given to the beneficiaries and to the additional batches. Regular monthly meeting shall be conducted to address problems encountered immediately. Additionally, all batches shall be capacitate more and shall be exposed to more develop and modernized farms.

The implementers of this project shall provide capability building focused on vegetable value-adding, packaging and labelling, and marketing of the harvested products. Reward system shall also be given to beneficiaries who performed well in the implementation of the project so that they will be more encouraged to do good.

VII. LITERATURE CITED

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IX.DOCUMENTATION

