International Journal of Research in Agricultural Sciences
Volume 5, Issue 6, ISSN (Online): 2348 – 3997

Organic Farming of Wild Native Ginger (*Zingiber Officinale*) at Barangay Aningalan, San Remigio, Antique

SUSAN F. ATIENZA, DM-BM[1*] and MARY-AN U. MAGBANUA, PHD[1]
[1]University of Antique, Sibalom, Antique, Philippines.
*Corresponding author email id: susanatienza12@yahoo.com

Date of publication (dd/mm/yyyy): 29/11/2018

Abstract **– This descriptive-correlational study aimed to identify the relationship of the method of farming with personal circumstances, natural environmental and agricultural land, and involvement in community service or organization of the identified farmer-beneficiaries in support to the project proposal on "Organic Farming of Wild Native Ginger (*Zingiber Officinale)* in Barangay Aningalan, San Remigio, Antique, Philippines" to be funded by the Departm--ent of Agriculture-Bureau of Agricultural Research (DA-BAR). A total of 92 farmers were identified by the local government unit (LGU) of San Remigio, Antique, 38 of them were from Barangay Aningalan. However, as of the survey date, only 32 farmers were present as the other 6 were out of town. The survey questions utilized were modified survey questions patterned from the demographic survey questionn--aire developed by the University of the Philippines (UP)-Visayas (1990s). The descriptive statistics used were frequency, percentage, and mean. For the analysis of relationship, chi-square was used using phi or Cramer's V to the determine the strength. The hypotheses were tested at 5% level of confidence. There was a predominance of females among the farmer-respondents where more than 68% were ages 44 below, are mostly high school level, a little over 93% are married, with 0 to 3 dependents, has gross income of Php 2,499 below, lives mostly in light material-houses with closed-pit toilets, more than 34% get water for drinking and for general use from well with pump, majority uses firewood as cooking fuel, more than half threw garbage in compost pits and plant flowers, vegetables and fruits, almost all of these farmer-respondents follows traditional practices of farming and organic method of farming. There were no significant relationships existing between the method of farming with the personal circumstances, natural environmental and agricultural land, and involvement in community service or organization of the farmer-respondents.**

Keywords **– Conventional Farming, Organic Farming, Traditional Farming and Wild Native Ginger.**

I. INTRODUCTION

Physical fitness is one of the most important aspects to a healthy body, and basis of dynamic and creative intellectual activity. This is manifested in the shifts of lifestyles of people to use natural products. Further studies indicated that the causes of cancers and other terminal diseases are the artificial or synthetic and genetically modified food materials. This increasing demand for natural products greatly helps the farming industry for organically grown farm products of the province.

Philippines has its policy on organic farming- Executive Order-481 in 2005 and further developed by the Republic Act No. 10068 in 2010 for its promotion and development with the aim to improve the quality of life and income among farmers, increase the presence of organic products and contribution of organic products to agricultural output. Government agencies that spearhead the programs to propagate and use of natural and indigenous resources especially for the manufacture of foods and medicine and support to "go natural" through their financial assistances are the Department of Environment and Natural Resources (DENR), Department of Agriculture (DA), Department of Health (DOH). Department of Science and Technology (DOST) and the Department of Social Welfare and Development (DSWD).

Organic farming of wild native ginger in the mountainous areas of the municipalities of San Remigio and Sibalom, Antique is important for the improvement of the economic lives of the rural folks. Likewise, it is one of the livelihood options offered to farmers. As stated by Aquino et. al. (2013) most of the people in rural areas depend on subsistence agriculture and the proper impleme--ntation of organic farming and its policy could help the issues on food production, food security, environmental and climate mitigation.

The "Antique's Ginger Tea (AGT) production is funded by the DOST, while the production of wild native ginger has been submitted for funding to the DA-BAR. There are at least 18 farmers who are currently indulged in planting and propagating the wild native ginger and will serve as beneficiaries of the said project.

For the sustainability of this project, the farmer-beneficiaries will be organized into a cooperative in order to encourage thrift and savings. Thus, highlighting the conduct of the survey to identify the personal circumstance, environmental awareness and practice, the agricultural farm land of these farmers, and their community involvement.

A. *Objectives*

To determine the impression of planting wild native ginger using the organic or traditional method of farming at Barangay Aningalan, San Remigio, Antique. Specifically, this study aims to:

1) Determine the personal circumstances of the farmer-respondents; 2) Determine the environmental awareness and practice and agricultural farm land of the farmer-respondents; 3) Determine the involvement in community services of the farmer-respondents; 4) Determine the practices and methods of farming among farmer-respondents; 5) Determine the relationship between personal circumstances and method of farming; 6) Determine the relationship between environmental awareness and practices and method of farming practiced among farmer-respondents; and 7) Determine the

relationship of community involvement with the method of farming of farmer-respondents.

B. *Conceptual Framework*

The conceptual framework shows the relationship of variables use in the study.

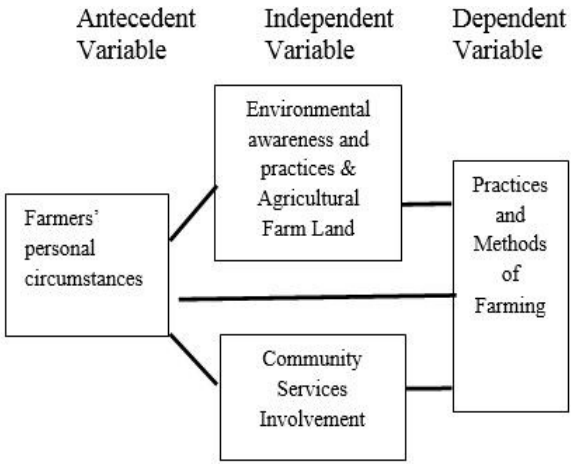

Fig. 1. Diagram showing the farmer's personal circumstances with the underlying factors environmental awareness and practices and community services or organizations with Methods of Farming Wild Native Ginger.

II. METHODS

This study used descriptive-correlational research, specifically using observational-survey. In this study, the researcher used naturalistic observation, where the respondents were visited several times, and conducted face-to-face interview in order to draw conclusions as to the acceptability of the project and their personal information.

III. RESULTS

A. *Personal Circumstances of the Farmer-respondents*

Table 1 shows that the personal circumstances of farmer-respondents when grouped as to age, 22 or 69% of the total sample ages 44 years and below and the other 10 or 31% ages 45 years and above.

As to sex, most of the farmer-respondents are female with 30 or 94% and two or 6% are male.

When these farmer-respondents were grouped as to their occupation, 27 or 85% are farmers, two or 6% were house keepers and government employees, and one or 3% is Overseas Contract Worker (OCW).

As to other source of income, 13 or 41% have no other source of income, eight or 25% for farming, three or 9% in social work, two or 6% as local government and vegetable vendors, and one or 3% of them is a laborer and a vendor.

When respondents were grouped as to their gross monthly income, covers the large number of respondents are earning Php 2,499 and below with 23 or 72%, there are four or 13% earning Php 2,500 – 4,999, and five or 16% are earning Php 5,000 and above.

As to their civil status, most of the respondent are marries with 30 or 94% of the total sample, while the other two or 6% are widow.

As to the size of number children of the farmer-respondents, almost half of them are medium sized or 3-5 children with 14 or 44% followed by small or 0-2 children with 13 or 41% and 5 of them or 15% are with large or 6-8 children.

In the farmer-respondents number of dependents, most of the them have small or 0-3 dependents with 27 or 84% of the total respondents and only 5 or 16% having a large or 4-6 number of dependents.

As to the highest educational attainment, 15 or 47% of them are high school followed by 14 or 44% are elementary, with only 3 or 9% are college.

Table 1. Personal circumstances of the farmer-respondents.

Personal Circumstances		f	%
Age	44 and below	22	69
	45 and above	10	31
Sex	Male	2	6
	Female	30	94
Occupation	Farmer	27	85
	House Keeper	2	6
	Government Employee	2	6
	OCW	1	3
Other Source of Income	Brgy. Tanod	1	3
	OFW	1	3
	DSWD	3	10
	Farming	8	25
	LGU	2	6
	Vegetable Vendor	2	6
	Laborer	1	3
	Vendor	1	3
	None	13	41
Gross Monthly Income	Php 2,499 and below	23	72
	Php 2,500 – 4, 999	4	12
	Php 5, 000 and above	5	16
Civil Status	Married	30	94
	Widow	2	6
Number of Children	Small (0-2)	13	40
	Medium (3-5)	14	44
	Large (6 -8)	5	16
Number of dependents	Small (0-3)	27	84
	Large (4-6)	5	16
Highest Educational Attainment	Elementary	14	44
	High School	15	47
	College	3	9

B. *Environmental Awareness and Practices of Farmer-respondents*

The results in Table 2 shows that when the farmer-respondents where categorized as to their house type, 17 or 53% are made up of light materials and 15 or 47% are of concrete materials.

When categorized as to type of toilet, most of the respondents are using close pit wherein 17 or 53% of the total sample, nine of them or 28% are using water sealed, four or 13% are using flushed and two or 6% are using open pit.

When categorized as to their sources of water, large number of them uses well with pump comprising 11 or 34%, using spring with eight or 25%, faucet with seven or 22%, open-dug with three or 9% and only one or 3% using well and spring, river or stream or brook, and faucet or purified.

When the respondents were categorized as to the type of cooking fuel, most of them uses firewood with 21 or 66%, followed by charcoal with seven or 22%, combination of firewood and charcoal with three or 9%, and combination of firewood and liquefied petroleum gas (LPG) with only one or 3% of the respondents.

As to their ways of garbage disposal, more of the respondents are using compost pit with 18 or 56% and the other 14 or 44% using collect and burn.

When the respondents' plants or trees in their backyard were identified, most of them have flowers, vegetable, and fruit trees with 17 or 53%, flowers and fruits trees only with four or 13%, flowers and vegetable only with three or 9%, while two or 6% are planting a combination of flowers, trees, vegetable, and not planting, and one or 3% planting the combination of vegetable and fruit trees, and flowers, vegetable and trees.

Table 2. Environmental awareness and practices of farmer-respondents.

Environmental awareness and practices		f	%
House Type	Light Material	17	53
	Concrete	15	47
Type of Toilet	Close pit	17	53
	Open pit	2	6
	Water sealed	9	28
	Flushed	4	13
Source of Water	Faucet	7	22
	Open-dug well	3	9
	Well with pump	11	35
	Spring	8	25
	Well/spring	1	3
	River/stream/brook	1	3
	Faucet/purified	1	3
Type of cooking fuel	Firewood	21	66
	Charcoal	7	23
	Firewood/Charcoal	3	9
	Firewood/LPG	1	3
Garbage disposal	Compost pit	18	56
	Collect and burn	14	44
Plants/trees in the backyard	Flowers/trees	2	6
	Vegetable/fruit trees	1	3
	Flowers/vegetable/ fruit trees	17	53
	Flowers/fruit trees	4	13
	Flowers/vegetable	3	10
	Flowers/vegetable/ trees	1	3
	Vegetable	2	6
	None	2	6

C. *Community Involvement of Farmer-respondents*

In Table 3, results show that most of the farmer-respondents have no community involvement comprising of 22 or 69% of the total sample, the other four or 13% are involved in social work, and one or 3% is involved in SPES, SSS pension, Farmer's Tech, Barangay Kagawad, LGU, and DSWD/LGU/AFON/AHDP.

Table 3. Community involvement of farmer-respondents.

Community Involvement	F	%
SPES	1	3
SSS Pension	1	3
Farmer's Tech	1	3
Barangay Kagawad	1	3
DSWD	4	13
LGU	1	3
DSWD/LGU/AFON/AHDP	1	3
None	22	69
Total		100

D. Farming Practices and Method of the Farmer-respondents

As shown in Table 4, the farming practices of most of the farmer-respondents is traditional with 31 or 97% of the total samples and the remaining 1 or 3% uses mechanized farming.

When they were categorized with their method of farming, more than half of the respondents with 17 or 53% are using organic farming and those 15 or 47% are using inorganic method of farming.

Table 4. Practices and method of farming among farmer-respondents.

Farming Practices and Method	**f**	**%**
Farming Practices		
Traditional	31	97
Mechanized	1	3
Methods of Farming		
Organic	17	53
Inorganic	15	47

E. *Relationship between Personal Circumstances and the Method of Farming*

Results shown in Table 5 that personal circumstances such as age, sex, occupation, gross monthly income, number of children, number of dependents, and highest educational attainment have no significant relationship to the farmers' method of farming. This means that whatever personal circumstance the farmer-respondent it has no connection as to their method of organic or inorganic farming.

Table 5. Relationship of personal circumstances and the method of farming.

Personal Circumstances		df	x^2	p
Age	Methods of Farming	1	1.006	.316
Sex	Methods of Farming	1	1.882	.170
Occupation	Methods of Farming	3	3.816	.282
Gross Monthly Income		2	1.472	.479

Personal Circumstances		df	x^2	p
Civil Status		1	.008	.927
Number of Children		2	.439	.803
Number of dependents		1	1.719	.190
Highest Educational Attainment		2	.563	.755

F. *Relationship between Environmental Awareness and Practices and the Practices and Methods of Farming*

Table 6 results show that environmental awareness and practices such as source of water, garbage disposal, and plants or trees in their backyard have no significant relationship to the farmers' method of farming. This means that farmers' awareness and practices show no bond as to their practices and method of farming.

Table 6. Relationship of environmental awareness and practices and method of farming of farmer-respondents.

Environmental Awareness and Practices		df	x^2	p
Source of Water	Methods of Farming	6	8.130	.229
Garbage disposal	Methods of Farming	1	.161	.688
Plants/trees in the backyard	Methods of Farming	7	5.760	.568

G. Relationship between Community Services Involvement and the Method of Farming

Results in Table 7 shows that community services involvement of farmer-respondents have no significant relationship to their method of farming. This is implying that whether the farmer-respondent are involved or not in any community services has no relation as to their use of organic or inorganic method of farming.

Table 7. Relationship of community services involvement and method of farming of farmer-respondents.

		df	x^2	p
Community Involvement	Methods of Farming	7	6.628	.469

IV. Conclusions

Based on the findings presented, the following conclusions are derived:

The farmer-respondents in Barangay Aningalan, San Remigio, Antique are mostly female, middle-aged, married, high school level, with few dependents and with very low monthly income. This made them good prospects for the project in organic farming.

Most of the farmer-respondents lived in houses made from light materials, had close pit toilets, get their water for drinking and general use from wells with manual pumps and uses firewood as cooking fuel, disposed garbage in a compost pit and plants flowers, vegetables, fruits trees, in their respective backyards, thus these farmers are living in a simple lifestyle.

Majority of them follow the organic method of farming since it is low cost and and can be found within their area.

Lastly, only few of the farmers are involved in commu-nity services (as observed, most of the people in the remote and mountainous barangays of San Remigio are hesitant to join associations/organizations not related with their religious sect or with the local government units.)

V. Recommendations

Given the findings and the accompanying conclusions, the following recommendations are given:

1) Enhance the farmer-respondents' community services involvement by joining actively in socio-civic organi--zations present in the barangay;
2) Conduct training-seminars that would enhance the knowledge and interests of the farmer-respondents on the importance of organic farming especially for wild native ginger;
3) Prepare a project proposal that would replicate the project of planting wild native ginger using organic method of farming in other barangays of the same municipality;
4) The University of Antique and the DA-BAR with the help of the LGU-San Remigio, should constantly monitor the farmer-beneficiaries with strict complian--ce of the use of organic farming method for the production of wild native ginger.

Acknowledgment

The Authors would like to thank the University of Antique for the opportunity to conduct this study. Likewise, the authors are grateful with the generosity of time of the respondents. And, lastly, the authors equally extend their heartfelt thanks to the local government units of both Barangay Aningalan and the Municipality of San Remigio for allowing them to conduct this study.

References

[1] Republic Act No. 10068-An Act providing for the Development and Promotion of Organic Agriculture in the Philippines and for other Purposes.
[2] Agri Farming. Available: http://agrifarming.in/
[3] DENR Antique.
[4] Department of Agriculture-Antique.
[5] National Statistics and Census Office – Antique Census of Household and Agriculture.
[6] A.P. Aquino, J.A.P. Deriquito, and M.A. Festejo, "Organic Agriculture Act Towards a Greener Philippines, October, 2013.

Author's Profile

Susan F. Atienza, DM-BM is an Associate Professor at the University of Antique, Sibalom, Antique, Philippines. She finished her Doctor of Management with concentration in business management from Central Philippine University, Jaro, Iloilo City, Philippines as a full-time faculty scholar of the University of Antique in 2014. Her Master in Business Administration degree was taken from the University of San Agustin, Iloilo City, Philippines in 2011. And, she earned her Bachelor's degree in Business Administration major in accounting from the University of the Philippines, Visayas, Iloilo City, Philippines in 1984. She is currently the director for Research and Development Unit of the University of Antique. She is a Professor for the professional courses in

the College of Business and Accountancy both for the undergraduate degree courses and for the Graduate School. At present, she is the Project Leader for the production and commercialization of wild native ginger at Barangay Aningalan, San Remigio, Antique, funded by the Department of Agriculture-Bureau of Agricultural Research. And, she is the Maker of the Utility Model with the Intellectual Property Office of the Philippines for the "Process of Producing Natural Ginger Tea", filed on March 15, 2017, with Application No. 2-2017-000110 and Reference No. is P22444/DL/LMM. Dr. Atienza is an Associate Member of the National Research Council of the Philippines (NRCP) and, a member of the Philippine Association for Graduate Education (PAGE). Dr. Atienza is also at present a member of the Regional Executive Committee of the Western Visayas Industry, Energy and Environment Research and Development of the Department of Science and Technology.

Mary-An U. Magbanua, PhD is an instructor at the University of Antique, Sibalom, Antique, Philippines. She finished her Doctor of Philosophy in Science Education major in Mathematics at West Visayas, State University, Iloilo City, Philippines a DOST-SEI scholar. Her Master of Education major in Mathematics at the University of the Philippines Visa--yas, Iloilo City, Philippines. She is currently the director for Statistical Center of the University of Antique and at the same time a general and specialization instructor in Mathematics for the College of Teacher Education. At present, she is the Study Leader for the production and commercialization of wild native ginger at Barangay Aningalan, San Remigio, Antique, funded by the Department of Agriculture-Bureau of Agricultural Research. Dr. Magbanua is a member of professional organizations including Mathematics Teachers Association of the Philippines, Inc., Mathematics Society of the Philippines, and Philippine Association for Graduate Education.