On Assessing the Crop Production Trainings in Eastern Samar, Philippines

Eunice A. Ugali
Municipal Agriculture Office, Lawaan, Eastern Samar, Philippines
E-mail: euniceugali@gmail.com

Karen Luz P. Yap
Visayas State University, Baybay City, Leyte, Philippines
E-mail: karenluzYap@gmail.com

Leomarich F. Casinillo
Visayas State University, Baybay City, Leyte, Philippines
E-mail: leomarichcasinillo02011990@gmail.com

Melbert O. Hungo*
Southern Leyte State University-Tomas Oppus, Southern Leyte, Philippines
Email: mhungo@southernleytestateu.edu.ph

Bijo S. Anand
Sree Narayana College, Punalur, Kerala, India
Email: bijoanand@gmail.com
*Corresponding

Abstract:

Assessing the effectiveness and relevance of livelihood trainings on crop production training impact holds essential importance because it determines the number of trained farmers who deployed technology and enhanced their standard of living. The researchers evaluated how farmers in Lawaan, Eastern Samar, Philippines regarded the Municipal Agriculture Office (MAO) crop production training programs for quality and economic gain. It involved 147 farmer trainees who participated in five workshops from 2020 to 2023. Data on socio-demographics, economic profiles, training perceptions, and challenges in technology adoption were collected through a survey. The statistics used in this study to analyze the results are descriptive techniques and correlation analysis. The study revealed that trainees approved of the training delivery which corresponded to their needs and evaluation findings and gave them positive feedback. The trainings were seen as helpful in delivering practical knowledge with new abilities while being highly efficient. The training perception of employees was shaped by their age combined with their monthly income alongside their religious affiliation. Financial obstacles proved to be the main obstacle that trainees encountered. The LGU-Lawaan should use budget allocations to conduct specialized training programs for banner programs since the trainings provided by MAO-Lawaan has demonstrated their high importance and success rate. MAO should develop joint ventures with lead agencies to share resources and collectively support the adoption of technology. The study advocates that the budget must increase for diverse training programs and advocates for establishing partnerships in order to improve technology adoption.

Keywords: Assessment**,** Crop Production, Effectiveness, Training Relevance

Introduction

The effectiveness of crop production trainings is vital for boosting agricultural productivity, enhancing farmers' skills, and encouraging sustainable farming practices (Piñeiro et al., 2020; Rebojo et al., 2023). These trainings are designed to provide farmers with the necessary knowledge and techniques to maximize crop yields, manage risks, and adapt to evolving agricultural conditions (Bizikova et al., 2020). An in-depth analysis of all key components that determine how ICT training programs impact farmers and agricultural systems before conducting a comprehensive assessment of effectiveness. Training programs must target individual farmer requirements and obstacles because success with new practices depends on it (Larochelle et al., 2019). Local agricultural problems like pest management, soil health, and climate resilience form the core of these trainings which enable farmers to develop sound decisions for sustainable farming practices (Mantino, 2021). For enhancing farmer understanding it is imperative to conduct hands-on learning activities and interactive sessions while providing step-by-step instructions. Success assessment of trainings depends significantly on evaluating their results through examining farming practice modifications alongside income transformations (Travis et al., 2021). The long-term success of crop production trainings depends on ongoing learning opportunities through refreshers and a lifetime learning environment that supports agricultural development (Biney, 2019).

The researchers argue that targeted training courses help agricultural workers develop their abilities which leads to enhanced agricultural efficiency and sustainable practices (Piñeiro, 2020). Strategic solutions for pest management and improved soil health comprise key targets that researchers prioritize for enabling farmers to tackle their local issues better (Tufan et al., 2021; Audouin et al., 2023). The researchers explain why practical educational experiences with regular assessment results help determine training outcomes for farming systems and rural economies. The implementation of crop production trainings serves researchers as an important educational instrument that provides farmers with vital expertise to handle agricultural obstacles and implement modern techniques that foster systemic agricultural development (Herath et al., 2021). Addressing the complexities within agricultural training program complexities requires dealing with multiple challenges according to Unay-Gailhard & Brennen (2022). The initial requirement for progress demands a clear definition of relevance together with effectiveness. Each farmer faces unique constraints in their farming operation that affect what information is relevant to them (Saadvandi et al., 2024). The assessment of effectiveness requires knowledge retention measurements and evaluation of farming practice alterations and yield improvements and economic benefits (Voges et al., 2020). Psychological measurement of impact remains difficult since improvements might stem from external sources which include weather conditions or resource availability (Unay-Gailhard & Brennen, 2022). Scientists encounter two main methodological obstacles while constructing surveys to determine farmers' unbiased insights accurately and maintaining data quality throughout the process (Bhakta et al., 2019). The sustainability of longitudinal tracking for impact assessment requires considerable financial and personnel resources alongside the continuous engagement of farmers throughout extended periods (Millán et al., 2019; Islam et al., 2021). The development of effective agricultural training programs faces multiple challenges as they contend with various factors that include diverse farming methods, distinctive local

modifications, differing education degrees, financial constraints, gender-related aspects, and the established trust within communities (Unay-Gailhard & Brennen, 2022).

Assessing the benefits and significance of the training sessions on crop production in Lawaan, Eastern Samar is essential in order to understand the extent to which farmers have benefited from the introduced technologies and the positive impact it has had on their livelihoods. The Municipal Agriculture Office in Lawaan, Eastern Samar must determine which barriers prevent farmers from using new technologies after completing their training sessions. This study evaluates how the Municipal Agriculture Office in Lawaan, Eastern Samar delivers its crop production training to farmers and the perception farmers hold about its usefulness. Specifically, the study aims to: describe the socio-demographic characteristics of the farmer trainees; assess the perceived relevance of the crop production training among farmers; determine the effectiveness of the training sessions; establish the relationship between specific socio-demographic and economic factors and the perceived relevance of the training; examine the connection between these factors and the effectiveness of the training; and identify the obstacles faced by farmers in adopting the technologies and methods taught during the sessions. Moreover, this study is crucial as it informs policy, enhances training effectiveness, improves productivity, empowers farmers, addresses adoption barriers, and strengthens community relationships. It contributes to sustainability, academic knowledge, and broader agricultural development, benefiting farmers and advancing food security goals.

Research Design

In this study, a descriptive research approach was utilized to evaluate farmers' perceptions of the significance and effects of the crop production training sessions organized by the Municipal Agriculture Office of Lawaan, Eastern Samar, Philippines from 2020 to 2023. Data was collected through an assisted descriptive survey, which included participants' socio-demographic information, economic status, feedback on the relevance and efficacy of the trainings, and challenges faced when applying the acquired technologies and methods. The objective was to assess the overall effectiveness of the farmers' participation in the training programs.

Sampling Method and Participants in the Research

This study was conducted in Lawaan municipality where the region contains 16 barangays based in Eastern Samar of Philippines. This 3.52 percent portion of Eastern Samar includes the 162.56 square kilometer or 62.76 square mile area. The people of Lawaan number 13,003 individuals who make up 2.73% of province residents along with 0.29% of Eastern Visayas residents. Lawaan is primarily an agricultural region, with 40% of its land area of 16,947.3001 hectares dedicated to agriculture. According to data from the Municipal Agriculturist's Office, agriculture employs 1,303 individuals, with 91% engaged in farming and 9% in livestock. This sector employs approximately 10.5% of the households in the municipality. The sample size calculation employed Slovin's formula in the case of training sessions with large participant numbers but total enumeration when sessions had minimal attendees. Farmer trainees numbering 147 completed five trainings run by the Municipal Agriculture Office in Lawaan between 2020 and 2023. Specifically, there were 58 respondents for vegetable production training, 25 for jackfruit production, another 25 for the season-long modified farmer field school focusing on rice seeds and farm mechanization, and 20 and 19 respondents for urban agriculture and coconut production trainings, respectively.

Table 1. Research respondent distribution.

NAME OF TRAINING	DURATION	VENUE	SAMPLE SIZE
1. Vegetable Production Training	November 3-5, 2020	Barangay Poblacion	58
3. Package of Technology for Jackfruit Production Training cum Gender Development	August 30-31, 2022	Demo Farm, Brgy.Taguite	25
4. Season-long Modified Farmer Field School on Production of High-Quality Inbred Rice Seeds and Farm Mechanization	June- November, 2023	Demo Farm, Brgy.Taguite	25
4. Urban Agriculture Training	August 15-17, 2023	Demo Farm, Brgy.Taguite	20
5. Coconut Production and Management Training	November 14-16, 2023	Benignitas Farm, Brgy. Taguite	19
		TOTAL	147

Data Collection

Data collection involved the use of a semi-structured survey questionnaire, which was adapted from the research conducted by Rasanjali et al. (2021), Sedebo et al. (2021), and Casinillo and Seriño (2022). The questionnaire was specifically tailored to the Philippine context and simplified to facilitate comprehension among farmers. The pre-test evaluation took place before data collection to verify the questionnaire's appropriate content. A field interview approach was used to gather information from targeted farmer-respondents. The survey examined different elements by obtaining information about participant demographics and family economics status while also evaluating knowledge retention regarding technological advancements, assessing training session effectiveness, and identifying barriers to practice implementation as well as suggesting ways to improve upcoming training initiatives of the Lawaan Municipal Agriculture Office in Eastern Samar.

Data Analysis

The collected data has been analyzed utilizing descriptive statistics, including frequency, means, and percentages, with the support of IBM SPSS version 20. In order to evaluate the association between specific socio-demographic and economic factors, and the perceived relevance and effectiveness of the training sessions, the analysis employed statistical methods such as Pearson's and Spearman's rho correlation coefficients, tested at a standard level of significance.

Results and Discussion

Respondent's Profile

Table 2 displays the socio-demographic attributes of the participants who actively participated in a series of five training sessions, which were conducted by the Municipal Agriculture Office in Lawaan, Eastern Samar executed five training sessions participated. Multiple training programs comprised the sessions including Vegetable Production Training (Training 1), Package of Technology for Jackfruit Production Training Cum Gender Development (Training 2), Season-Long Modified Farmer Field School on Production of High-Quality Inbred Rice Seeds and Farm Mechanization (Training 3), Urban Agriculture Training (Training 4), and Coconut Production and Management Training (Training 5). In terms of age, most of the trainees who attended Trainings 1 (56.9%), 2 (56%), 3 (64%), and 4 (55%) are in their middle age of 40 to 59 years old while in Training 5 (52.6%) are in their young age of 20-39 years old. This result corroborates with the MAO 4-year end reports that showed that farmers in Lawaan who are middle age are more willing to adopt new techniques and technologies through trainings because they are the ones who are active in doing farm tasks and activities compared to the younger and older ones (Casinillo & Seriño, 2022). Most of the respondents in Trainings 2 (76%), 3 (56%), 4 (80%) and 5 (63.2%), are female, while

for Training 1, the majority are male (55.2%). This means that females are more responsive to invitations for trainings than men. Truly, the training programs of MAO are gender sensitive as women are given equal opportunities to participate in the training sessions and it is consistent with the study of Kaaria et al. (2016).

It can be seen that, in terms of civil status, nearly every participant in the four trainings who attended are married and only Training 1 with 55% are single. Align with the study conducted by Red et al. (2021), it has been observed that married people are willing to engage in any activities that could give them an additional source of livelihood and possibly increase their income. As to religion, it can be observed that in 5 trainings attended, the majority of the participants are Roman Catholic. Respondents in Trainings 1 (12.1%) and 2 (12%) who identify as Born Again Christians follow. In terms of their educational attainment, many farmers in Training 2 (37.9%), 3 (45%), 9 (45%), and 11 (57.9%) are high school graduates while 40% of training respondents in Training 1 are college graduates. Instead of going to school, some of them might have chosen to give up/ sacrifice their studies to earn a living and help on their farms to help their parents with family needs (Casinillo & Seriño, 2022). About the size of the households of the respondents, almost all of them belong to small families consisting of one to four people. Only a few individuals live in large families with more than ten people living in it.

Table 2. Socio-demographic profile of the respondents

Variable	Trainings attended by Farmer-Respondents*				
	Training 1 (n=58)	Training 2 (n=25)	Training 3 (n=25)	Training 4 (n=20)	Training 5 (n=19)
Age					
Young age (20-39)	3 (5.2%)	4 (16%)	2 (85%)	6 (30%)	10 (52.6%)
Middle age (40-59)	33 (56.9%)	14 (56%)	16 64%)	11 (55%)	7 (36.8%)
Old age (60 and above)	22 (37.9%)	7 (28%)	7 (28%)	3 (15%)	2 (10.5%)
Sex					
Female	26 (44.8%)	19 (76%)	14 (56%)	16 (80%)	12 (63.2%)
Male	32 (55.2)	6 (24%)	11 (44%)	4 (20%)	7 (36.8%)
Civil Status					
Single	6 (10.3%)	8 (32%)	4 (16%)	11 (55%)	3 (15.8%)
Married	45 (77.6%)	15 (60%)	19 (76%)	6 (30%)	14 (73.7%)
Separated/Widowed	7 (12.1%)	2 (8%)	2 (8%)	3 (15%)	2 (10.5%)
Religion					
Roman Catholic	49 (84.5%)	22 (88%)	25 (100%)	19 (95%)	16 (84.2%)
Born Again Christian	7 (12.1%)	12 (12%)	0 (0%)	1 (5%)	2 (10.5%)
Apolostic	1(1.7%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Baptist	1 (1.7%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Iglesia Ni Cristo	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1 (5.3%)
Educational Attainment					
Elementary level	4 (6.9%)	0 (0%)	1 (4%)	3 (15%)	5 (26.3%)
Elementary Graduate	6 (10.3%)	1 (4%)	3 (12%)	1 (5%)	1 (5.3%)
High School Level	6 (10.3%)	5 (20%)	4 (16%)	1 (5%)	0 (0%)
High School Graduate	22 (37.9%)	6 (24%)	14 (56%)	9 (45%)	11 (57.9%)
College Level	10 (17.2%)	3 (12%)	1 (4%)	1 (5%)	1 (5.3%)
College Graduate	10 (17.2%)	10 (40%)	2 (8%)	5 (25%)	1 (5.3%)
Household size					
Small (1-4 individual)	33 (56.9%)	15 (60%)	16 (64%)	10 (50%)	9 (47.4%)
Medium (5-9)	21 (36.2%)	7 (28%)	6 (24%)	10 (50%)	7 (36.8%)
Large (10 above)	4 (6.9%)	3 (12%)	3 (12%)	0 (0%)	3 (15.8%)

*Name of Training:
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Training 4- Urban Agriculture Training
Training 5- Coconut Production and Management Training

Table 3 presents the economic profile of training participants in terms of the number of years in farming, estimated monthly income, and access to credit. The results show that the majority of farmer respondents in Trainings 1 (41.4%), 3 (56%), and 5 (47.4%) had been farming for ten to nineteen years, while trainings 2 (32%) and 4 (45%) had respondents with less than ten years of experience. This coincided with the age profile of farmers, as most of them belonged to the middle age range of 40-59 years old, indicating that they had started

farming at an early age and had been farming for almost two decades now. With regards to income, a majority of participants in all five training sessions earn less than 9,520 per month, making them classified as poor. 56.9% in Training 1, 60 % in Training 2, 84% in Training 3, 70% in Training 4 and 84.2% in Training 5. Additionally, a few percent of the population makes between Php 9,520 and Php 19,040 per month. Only 4 farmer respondents (6.9%) in Training 1 are classified as middle-income earners, with an income ranging from PhP19, 040 to PhP38, 080. This result shows that poverty is rampant among the respondents. The majority of farmer respondents are dependent on their farming. Few people earn extra money from sources other than farming, such as businesses, remittances, government employment, and pensions. As a result, monthly income is decreased. Additionally, due to a lack of resources for agricultural inputs, the majority of farmers cultivate their lands in small areas. When it comes to access to credit, the majority of training respondents in trainings 1 (60.3%), 2 (52%), 3 (64%), 4 (70%), and 5 (78.9%) reported having no credit in any lending establishment. The results also show that very few respondents have access to credit and are currently borrowers at various banks, including Card Bank, Dungganon, and Landbank.

Table 3. Socio-economic profile of training participants

Variable	Trainings attended by Farmer-Respondents*				
	Training 1 (n=58)	**Training 2 (n=25)**	**Training 3 (n=25)**	**Training 4 (n=20)**	**Training 5 (n=19)**
No. of years in farming					
Less than 10	8 (13.8%)	8 (32%)	1 (4%)	9 (45%)	5 (26.3%)
10 to 19	24 (41.4%)	6 (24%)	14 (56%)	8 (40%)	9 (47.4%)
20 to 29	9 (15.5%)	3 (12%)	2 (8%)	1 (5%)	2 (10.5%)
30 to 39	12 (20.7%)	6 (24%)	5 (20 %)	2 (10%)	2 (10.5%)
40 or more	5 (8.6%)	2 (8%)5	3 (12%)	0 (0%)	1 (5.3%)
Estimated Month Income					
Poor	44 (56.9%)	15 (60%)	21 (84%)	14 (70%)	16 (84.2%)
Low Income	36.2 (36.2%)	10 (40%)	4 (16%)	6 (30%)	3 (15.8%)
Middle Income	4 (6.9%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Access to credit					
Yes	23 (39.7%)	12 (48%)	9 (36%)	6 (30%)	4 (21.1%)
No	35 (60.3%)	13 (52%)	16 (64%)	14 (70%)	15 (78.9%)

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Farm Profile of Farmer-trainees
Table 4 presents the farm profile of farmer trainees in terms of type of farming activity, farm area, and farm status and water source. The farm profile of the respondents is important data since it will provide information as to their farming status and will give a detailed picture of the respondents' farm operation. Result shows that there are various farming activities of the farmer respondents and the majority of farmers who attended Trainings 1 (36.2%) and Training 4 (75%) are in vegetable farming. For Training 2 (75%) and 5 (73.7%), majority of the them are engaged in vegetable and fruit tree farming while in Training 3 (56%) are involved in rice farming. Some of the participants who attended the five trainings were also into fruit tree farming, livestock and poultry farming along with vegetables and fruit trees. These data show that farmers-trainees are selected for each training program by the Municipal Agriculture Office (MAO) and other related agencies based on the type of farming activity the farmers are engaged in.
In terms of farm area, the majority (40% to 84%) of the respondents attended the five trainings to cultivate the land of about 1-3 hectares in size and most of them are tenants. In Training 1, 74.1% are tenants, 64% in Training 2, 52% in Training 3 and 55% in Training 4. Only in Training 5 (73.7%) has more than half of the cultivators declared themselves to be the land's owners. In terms of water sources, most of the respondents in Training 1 (37.8%) and 5 (42.1%) get their water from streams, whereas respondents in Trainings 3 (56.7%)

come from irrigation and Training 2 (40%) from creeks, and Training 4 (45%) respondents receive their water from Lawaan Water Supply System (LWSS). The water sources of farmer respondents differ because they are situated in different locations.

Table 4. Farm Profile of Farmer Trainees

Variable	Trainings attended by Farmer-Respondents*				
	Training 1 (n=58)	Training 2 (n=25)	Training 3 (n=25)	Training 4 (n=20)	Training 5 (n=19)
Type of farming activity					
Vegetable Farming	21 (36.2%)	0 (0%)	0 (0%)	15 (75%)	0 (0%)
Rice and Vegetable Farming	17 (29.3%)	0 (0%)	8 (32%)	0 (0%)	0 (0%)
Vegetable and Fruit Trees Farming	6 (10.3%)	19 (76%)	0 (0%)	2 (10%)	14 (73.7%)
Rice, Vegetable and Livestock Farming	3 (5.2%)	0 (0%)	1 (4%)	0 (0%)	0 (0%)
Vegetable and Livestock Farming	3 (5.2%)	0 (0%)	0 (0%)	3 (15%)	0 (0%)
Coconut and Vegetable Farming	1 (1.7%)	0 (0%)	0 (0%)	0 (0%)	3 (15%)
Fruit Trees Farming	1 (1.7%)	3 (12%)	0 (0%)	0 (0%)	0 (0%)
Rice Farming	1 (1.7%)	0 (0%)	14 (56%)	0 (0%)	0 (0%)
Rice, Vegetables, and Root Crop Farming	1 (1.7%)	2 (8%)	0 (0%)	0 (0%)	1 (5.3%)
Vegetable Farming and Poultry Farming	1 (1.7%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Vegetable, Fruit Trees, and Poultry Farming	1 (1.7%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Vegetable, Fruit Trees, and Rice Farming	1 (1.7%)	1 (4%)	2 (8%)	0 (0%)	0 (0%)
Vegetable, Poultry, and Fruit Tree Farming	1 (1.7%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Farm area					
Less than 1 ha	23 (39.7%)	4 (16%)	7 (28%)	12 (60%)	3 (15.8%)
1-3 ha	34 (58.6%)	21 (84%)	18 (72%)	8 (40)	15 (78.9%)
4 or more	1 (1.7%)	0 (0%)	0 (0%)	0 (0%)	1 (5.3%)
Farm status					
Owner	15 (25.9%)	8 (32%)	11 (44%)	9 (45%)	14 (73.7%)
Tenant	43 (74.1%)	16 (64%)	13 (52%)	11 (55%)	5 (26.3%)
Lessee	0 (0%)	1 (4 %)	1 (4%)	0 (0%)	0 (0%)
Water Source					
Stream	19 (32.8%)	3 (12%)	1 (4%)	3 (15%)	8 (42.1%)
Irrigation	15 (25.9%)	3 (13%)	14 (56%)	0 (0%)	0 (0%)
Creek	7 (12.1%)	10 (40%)	2(8%)	3 (15%)	4(31.6%)
Deep well	6 (10.3%)	4 (16%)	2(8%)	1 (5%)	0 (0%)
LWSS	6 (10.3%)	3 (12%)	0 (0%)	9 (45%)	4 (21.1%)
Dig Hole	3 (5.2%)	0 (0%)	0 (0%)	0 (0%)	1 (5.3%)
Irrigation and Deep well	2 (3.4%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Creek and LWSS	0 (0%)	1 (4%)	0 (0%)	0 (0%)	0 (0%)
Timba	0 (0%)	1 (4%)	0 (0%)	0 (0%)	0 (0%)
Rain	0 (0%)	0 (0%)	4 (16%)	0 (0%)	0 (0%)
Rain and Dig Hole	0 (0%)	0 (0%)	2 (8%)	4 (20%)	0 (0%)

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Relevance of Crop Production Trainings

Training relevance perception addresses delivering needed courses to learners who want better skills and wish to continue their educational journey in chosen subjects. Different aspects constituted the relevance evaluation in this study which included training timeliness and new technology application to current needs together with training sustainability and venue selection, trainer expertise, facilitator communication, post-training support, and participant satisfaction. The training sessions achieved median ratings of 4.0 across all five events thus demonstrating excellent relevance for all evaluated aspects. The trainees considered the classes extremely relevant when the training was prompt, met their requirements, and dealt efficiently with current farm demands.

Table 5. Trainees' perception in terms of training relevance

Variable	Training 1 (n=58)		Training 2 (n=25)		Training 3 (n=25)		Training 4 (n=20)		Training 5 (n=19)	
	Median	Adjectival rating	Median	Adjectival rating	Median	Adjectival rating	Median	Adjectival rating	Median	Adjectival rating
1. Timeliness of training	4	Highly relevant	4	Highly relevant	4	Highly relevant	4	Highly relevant	4	Highly relevant
2. Relevance of the new technologies	4	Highly relevant	4	Highly relevant	4	Highly relevant	4	Highly relevant	4	Highly relevant
3. Practices to your pressing problems and needs	4	Highly relevant	4	Highly relevant	4	Highly relevant	4	Highly relevant	4	Highly relevant
4. Suitability of the training	4	Highly relevant	4	Highly relevant	4	Highly relevant	4	Highly relevant	4	Highly relevant
5. Suitability of the schedule of the training	4	Highly relevant	4	Highly relevant	4	Highly relevant	4	Highly relevant	4	Highly relevant
6. Suitability of the venue and the place where sessions were conducted	4	Highly relevant	4	Highly relevant	4	Highly relevant	4	Highly relevant	4	Highly relevant
7. Knowledge of the trainers	4	Highly relevant	4	Highly relevant	4	Highly relevant	4	Highly relevant	4	Highly relevant
8. Communication skills of the resource person	4	Highly relevant	4	Highly relevant	4	Highly relevant	4	Highly relevant	4	Highly relevant
9. Follow up after the training	4	Highly relevant	4	Highly relevant	4	Highly relevant	4	Highly relevant	4	Highly relevant
10. Your overall level of satisfaction with the relevance of the training	4	Highly relevant	4	Highly relevant	4	Highly relevant	4	Highly relevant	4	Highly relevant

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Legend:
Highly relevant*- if the training was very timely, very suitable, and was the answer to the pressing needs of the farmers.*
Relevant*- if the training was suitable and was the answer to the pressing needs of the farmers but not timely.*
Partially Relevant *the training was an answer to the pressing needs of the farmers but the training was not timely and suitable.*
Not relevant*- if it is organized as untimely, not suitable to the farmers, and is not the answer to the pressing needs of the farmers.*

As to the relevance of new technologies, the participants believed that the technologies they were taught would enable them to increase their output. The trainees found the resource persons were knowledgeable and competent enough to discuss the topics- clarify ideas and convince participation. In addition, as to the resource person's communication skills, the respondents perceived them as effective speakers because they used language that they could understand (Morrell & Korsgaard, 2011). As shown in Table 5, the trainees felt comfortable with the schedule, timing, and venue of the trainings conducted. An excellent environment will ensure that participants are relaxed, engaged, and in the best mental state of learning (Medhi et al., 2017). Easy access to the facility can enhance trainee comfort, such as having the comfort room available at all times. Furthermore, the training's timing and schedule is crucial since it affects the training's relevance in a variety of ways. The convenience of the chosen time and schedule is paramount among the essential components under the category of farmers' training (Rasanjali et al., 2021). In terms of the respondents' overall satisfaction with the trainings, they assessed them as highly relevant. The respondents stated that they improved their skills and learned more as a result of attending the trainings.

Level of Effectiveness of Crop Production Trainings

Table 6 shows the level of effectiveness in terms of practical application, skill orientation, level of satisfaction, usefulness of the training, and overall level of effectiveness. Training empowers individuals to tackle challenges and seize opportunities. It provides essential skills to enhance farm management and productivity. In all five trainings conducted, the majority of the trainees revealed that in nutrient and pest management in Training 1 (98.3%), cultural management of jackfruit in Training 2 (100%), palay check system in Training 3 (100%), cultural management of coconut in Training 4(100%) and container

gardening in Training 5 (100%) have practical application to their crop production. This result indicates that the vast majority of farmer trainees have applied the knowledge and skills they acquired during the trainings. In terms of skill orientation, the majority of the respondents rated the trainings as both practical and theoretical 81.0%, 72%, 80%, 80%, and 64.4%, respectively. Trainees perceive trainings as both highly theoretical and highly practical if the training includes a combination of lectures, presentations of facts and figures, and involvement in actual demonstrations and hands-on activities. The results show that the trainings conducted in Lawaan, Easter Samar were not limited only to theories but also involved application. In addition to teaching the farmers the theories, figures, and facts related to the subject, the trainers made every effort to include an actual technology demonstration, hands-on activities and even benchmarking in the program (Sabate & Labrador, 2022).

Regarding the level of satisfaction, the majority of the trainees are either satisfied (79.3%, 76%, 96%, 70%, and 63.2%) and very satisfied (19.0%, 24%, 4%, 30%, 36.8%), respectively. Trainees perceived trainings as very satisfactory if the training was appropriate to their needs, if they gained adequate knowledge such as proper fertilizer application, record keeping, pest and disease management, and proper cultural management, if the resource persons and facilitators were competent, the food and venue are satisfying and if there's a post-training support. Trainings are perceived as satisfactory if the training is appropriate to their needs, they gained adequate knowledge, the resource persons and facilitators were competent, and the food and venue were satisfying but did not have post-training support (Wonde et al., 2023). Trainees reported that they were satisfied because the training sessions act as invaluable platforms for the acquisition of new knowledge and addressing pressing needs and problems. Aside from that, an approachable training management team, knowledgeable resource persons, delicious food, the right timing of the training, and a suitable venue contribute to a good rating from the trainees. High satisfaction ratings prove that extension services have a positive impact on farmers' empowerment, new perceived ideas, and agricultural output advancement (Ani & Correa, 2016; Casinillo, 2022). Table 8 depicts the level of effectiveness in terms of the training usefulness. The majority of the respondents rated it as highly useful, with a percentage of 84.5%, 84%, 80%, 60%, and 84.2%, respectively. Trainings are perceived as highly useful if the training provides knowledge that is actually needed by the farmer while useful if the training provided knowledge but is not actually needed by the farmer because it is not what they are producing in their farms. Trainees stated that their attended trainings organized by the Municipal Agriculture Office in Lawaan were all useful but not all can adopt them due to various reasons such as lack of capital, farm machinery, and water. Finally, the majority of the farmer respondents in five trainings indicated that the training was highly effective which is consistent with the findings of Red et al. (2021).

Table 6. Distribution of farmer-trainees in terms of practical application, skill orientation, level of satisfaction, usefulness of the training, and overall level of effectiveness.

Variable	Trainings attended by Farmer-Respondents*				
	Training 1 (n=58)	Training 2 (n=25)	Training 3 (n=25)	Training 4 (n=20)	Training 5 (n=19)
Practical application					
Yes	57 (98.3%)	25 (100%)	25 (100%)	20 (100%)	19 (100%)
No	1 (1.7%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0%)
Skill orientation					
Highly theoretical	2 (3.4%)	2 (8%)	3 (12%)	0 (0.0%)	3 (15.8%)
Highly practical	9 (15.5%)	5 (20%)	2 (8%)	4 (20%)	3 (15.8%)
Both	47 (81.0%)	18 (72%)	20 (80%)	16 (80%)	13 (68.4%)
Level of satisfaction					
Very dissatisfied	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Dissatisfied	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Neither dissatisfied nor satisfied	1 (1.7%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Satisfied	46 (79.3%)	19 (76%)	24 (96%)	14 (70%)	12 (63.2%)
Very satisfied	11 (19.0%)	6 (24%)	1 (4%)	6 (30%)	7 (36.8%)
Usefulness of the training					
Useful	9 (15.5%)	4 (16%)	5 (20%)	8 (40%)	3 (15.8%)
Highly useful	49 (84.5%)	21 (84%)	20 (80%)	12 (60%)	16 (84.2%)
Overall level of effectiveness					
Poor	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0%)
Moderate	5 (8.6%)	2 (8%)	4 (16%)	8 (40%)	1 (5.3%)
High	53 (91.4%)	23 (92%)	21 (84%)	12 (60%)	18 (94.7%)

*Name of Training:
Training1- Vegetable Production Training
Training 2- Package of Technology for Jackfruit Production Training cum Gender Development
Training 3- Season-long Modified Farmer Field School on Production of High- Quality Inbred Rice Seeds and Farm Mechanization
Training 4- Urban Agriculture Training
Training 5- Coconut Production and Management Training

Relationship Between the Profile, and the Relevance and Effectiveness of the training

Table 7 depicts the relationship between the profile of farmers and the relevance and effectiveness of the training they attended. Out of ten socio-demographic and economic variables, on age in training 3 and 5, civil status in training 5 were found significant. The result implies that farmer trainees' age and civil status have a bearing on how they perceived the trainings they attended to be relevant. For training 1, 2, and 4, the age and civil status of the trainees do not matter in how they perceive the relevance of the training. Relevance is significantly associated with the age of farmer trainees (r=0.4885, p<0.05) in training 3. Older farmers tend to give higher relevance ratings for the training. This result implies that older participants who have long farm experience tend to understand that attending training is very important to improve their farm production. Moreover, the older the participants, the more mature they are in weighing things whether they matter or not.

This result corroborates the study of Casinillo et al. (2024) which states that as farmers age, they become more receptive to new technologies. If they are more knowledgeable, they are more likely to accept new technologies. Through training experiences, farmers learned how to apply new technology effectively and economically while also being encouraged to do so. This serves as a form of education. As a result, the experienced farmers accepted technology because they had assessed the farming approach over time. Table 9 also presented the relationship of socio-demographic and economic profile to the training effectiveness. Training effectiveness is an indication of how well a program accomplishes its goals and provides the expected outcomes (Valenzona et al., 2020; Yap et al., 2024). It assesses how well the training has given participants the information, and skills required to effectively carry out their job responsibilities or meet set learning goals (Olorunfemi et al., 2020; Wonde et al., 2023).

Table 7. Relationship between the profile of farmers and the relevance and effectiveness of the training

Variable	Trainings attended by Farmer-Respondents*									
	Training 1 (n=58)		Training 2 (n=25)		Training 3 (n=25)		Training 4 (n=20)		Training 5 (n=19)	
	Relevance	Effectiveness	Relevance	Effectiveness	Relevance	Effectiveness	Relevance	Effectiveness	Relevance	Effectiveness
Age[1]	0.23^{ns}	0.32^{ns}	0.41^{ns}	0.24^{ns}	$0.48*$	0.25^{ns}	0.27^{ns}	0.29^{ns}	$0.66*$	0.26^{ns}
Sex[2]	0.07^{ns}	0.19^{ns}	0.01^{ns}	0.29^{ns}	0.16^{ns}	0.17^{ns}	0.18^{ns}	0.28^{ns}	0.14^{ns}	0.10^{ns}
Civil Status[1]	0.13^{ns}	0.08^{ns}	0.34^{ns}	0.37^{ns}	0.26^{ns}	0.24^{ns}	0.18^{ns}	0.19^{ns}	$0.84*$	0.20^{ns}
Religion[2]	0.12^{ns}	0.07^{ns}	0.16^{ns}	0.09^{ns}	NA	NA	NA	NA	0.22^{ns}	0.66^{*}
Education[2]	0.00^{ns}	0.13^{ns}	0.24^{ns}	0.25^{ns}	0.03^{ns}	0.00^{ns}	0.37^{ns}	0.20^{ns}	0.35^{ns}	0.24^{ns}
No. of years in farming[3]	0.09^{ns}	0.12^{ns}	0.29^{ns}	0.16^{ns}	0.10^{ns}	0.22^{ns}	0.02^{ns}	0.21^{ns}	0.40^{ns}	0.29^{ns}
Farm area[3]	0.04^{ns}	0.06^{ns}	0.28^{ns}	0.17^{ns}	0.24^{ns}	0.10^{ns}	0.24^{ns}	0.02^{ns}	0.10^{ns}	0.02^{ns}
HH size[1]	0.20^{ns}	0.10^{ns}	0.24^{ns}	0.42^{ns}	0.48^{ns}	0.20^{ns}	0.22^{ns}	0.14^{ns}	0.23^{ns}	0.27^{ns}
Estimated monthly income[1]	0.23^{ns}	0.14^{ns}	0.13^{ns}	0.24^{ns}	0.014^{ns}	$0.50*$	0.03^{ns}	0.32^{ns}	0.13^{ns}	$0.49*$
Access to credit[2]	0.00^{ns}	0.03^{ns}	0.20^{ns}	0.06^{ns}	0.28^{ns}	0.22^{ns}	0.18^{ns}	0.40^{ns}	0.07^{ns}	0.04^{ns}
Farm status[2]	0.10^{ns}	0.24^{ns}	0.07^{ns}	0.13^{ns}	0.05^{ns}	0.14^{ns}	0.04^{ns}	0.12^{ns}	0.01^{ns}	0.19^{ns}

ns=not significant; 1=eta coefficient, 2=point-biserial, 3=Spearman rank
*Name of Training:
Training1- Vegetable Production Training
Training 2- Package of Technology for Jackfruit Production Training cum Gender Development
Training 3- Season-long Modified Farmer Field School on Production of High-Quality Inbred Rice Seeds and Farm Mechanization

Training 4- Urban Agriculture Training
Training 5- Coconut Production and Management Training

In Table 7, the effectiveness of the training is significantly related to estimated monthly income and religion. Training 3 shows that effectiveness is significantly related to estimated family income (r=0.50, p< 0.05). This means that farmers with higher family incomes usually perceived the training to be highly effective. The data demonstrates that users with lower financial standing rate training effectiveness at a lower level than users at higher income levels. The religious survey indicated that Roman Catholics assigned lower ratings compared to the rest of the participants. Modifying participant attributes and beliefs regarding behaviors alongside religious practices affects the effectiveness of training programs. Participation levels together with the learning drive will likely improve when training materials feature religious content that holds significance for participants (Morrell & Korsgaard, 2011). The analysis showed that the Municipal Agriculture Office of Lawaan, Eastern Samar received no statistical correlations between the effectiveness of their trainings and sex demographics alongside education, length in farming, accented landholdings, family size, and agricultural funding availability and property qualifications. This means that both male and female, graduate or not, reported almost similar ratings on the context of effectiveness and relevance of each training. It also reflected that long years in farming, having a larger farm area, and access to credit do not always imply a higher rating of relevance and effectiveness. This means that farmers perceived the training to be highly relevant and highly effective regardless of their socio-demographic background (Red et al., 2021; Casinillo, 2022).

Conclusion and Economic Implications

On the extent of relevance of training as measured by the appropriateness of training, all training attended by the farmer-trainees was appropriate and was based on the conducted training needs assessment. In terms of skill orientation, the majority of the respondents rated the trainings as both practical and theoretical and they are either satisfied or very satisfied with the trainings they attended. As to the usefulness of the trainings, majority of them rated the trainings as highly useful. Given the positive results on the relevance and effectiveness of trainings conducted by the Municipal Agriculture Office, it suggests the Local Government Unit of Lawaan in Eastern Samar allocate a portion of the LGU budget to conduct trainings for every banner program consistently. The major constraint identified in

this study is the lack of financial resources. It is recommended that the Municipal Agriculture Office foster partnerships and collaboration among farmers, agricultural cooperatives, NGOs, private companies, and government agencies to pool resources, share costs, and collectively invest in technology adoption. The Municipal Agriculture Office should create a Monitoring and Evaluation (M&E) Team to effectively assess the farmer-beneficiaries of each trainings conducted and evaluate the economics of necessity. Moreover, it is suggested that the local government must allocate a monetary fund or subsidies for crop production trainings and support the needs of the extension agents and farmers. As for future studies, one must investigate the level of satisfaction of the farmers in regards to the participation of the training and its economic correlates using regression analysis to strengthen the current findings of the study.

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