



Implementation of Farmers Field School (FFS) Among Rice Farmers at Calaran, Calamba, Mismis Occidental

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ABSTRACT

This study determined the implementation of farmers field school (FFS) among rice farmer at Calaran Calamba Misamis Occidental. The study was conducted at Calaran, Calamba, Misamis Occidental with thirty (30) respondents. The majority of respondents had low level of adoption in respect to rice production technology. The data were gathered using structured questionnaire and analyzed using frequency, percentage, and average weighted mean. Farmer Field School Approach is based on the concepts and principles of people centered learning, and were they answer for themselves. That means the farmers can develop solutions to their own problems and developed as an alternative to the conventional top-down test and verification of the extension approaches. This season-long farmer field school on rice was conducted which bring farmers together to carry out IPM over the life cycle of the rice plants as well as the factors that influence pest and diseases control and decision making at all growth stages of the rice every day until such trained farmer become experts in their own field. Farmer field school is a form of adult education, which evolved from the concept where farmers learn optimally from field observation, experimentation, and experiences and new information from outside the community.

BACKGROUND OF THE STUDY

Farmers field school is a group-based learning process that has been used by a number of governments to promote Integrated Pest Management (IPM). Farmers field school is a form of adult education, which evolved

from the concept where the farmers learn optimally from field observation, experimentation and experience, and new information from outside the community. It consists of a group of farmers who get together to study a particular topic. Farmers field school also provides opportunities for learning by doing. It teaches basic

agriculture and management skills that makes farmers experts in their own farms (SUSTAINET EA 2010).

For these reasons, the Department of Agriculture has implemented farmers field school in partnership with other agencies like the Phil Rice, BSWM, ATI, and others, designed to effect socio-economic betterment throughout the country. Our country continually adopts the programs to strengthen and to enhance our Agriculture sector for several reason; firstly, the majority of people are trained in Agricultural pursuit: secondly, because of the increasing trends of population that can result in possible food shortage: and thirdly, due to the lack of modern technologies, which can lower the income rate of the farmers. Lastly, field schools are a way for farming communities to improve their decision making and stimulate local innovation for sustainable agriculture. However, in Calamba, Misamis Occidental, although farmers go through the program, they do not readily adopt and accept modern technologies and new improve farming systems because they have no previous experience and are afraid of the unknown. In fact, that is understandable because we cannot blame the farmers to risk their financials investment on something, they perceive is not guaranteed or proven. Thus, they still stick with the old-age techniques and use the traditional farming system that can produce proven measurable outputs and consumer's acceptability.

The farmers field school activities were implemented on march 2015 by the Department of Agriculture under the municipality of Calamba, Misamis, Occidental with the cooperation of the officials, farmers, extension workers and Municipality Agriculture Officers (MAO). The purpose of the study is to present to the farmers the proper technology of rice production, minimized used of chemicals, and organically grown rice.

The general objectives of the FFS is to lower farm cost, increase farmers' profit and improve the environment. The specific objectives are to reduce risk of chemical poisoning, to increase rice production from 10 to 20% per hectare, to provide additional farmers' income, to familiarize farmers with the different pest through Agro Ecosystem Analysis (AESA), and reduce damage to the environment.

Furthermore, the study aimed to investigate the status of the implementation of farmers field school among rice farmers in term of farmer's awareness, knowledge, skills, and adoption to measures the effectiveness of the program and emphasize the empowerment of farmers to implement their own decisions in their fields.

Conceptual Framework

Figure 1 shows the conceptual framework which presents the variable of the study. The first set of variables includes socio-economic information of rice farmers such as age, sex, marital status, household monthly net income, land tenurial status, farms size, farming experience, and educational attainment. Another set of variable includes farmers field school related factors such as the situation of FFS in the Philippines, implementation of FFS, the role of FFS, importance of FFS among rice farmers, strength and weakness of the FFS Approach, characteristics of the FFS Approach and learning materials. The final variable explored in this study was the implementation of the farmers field school, particularly the responsiveness of the farmers.

Research Paradigm

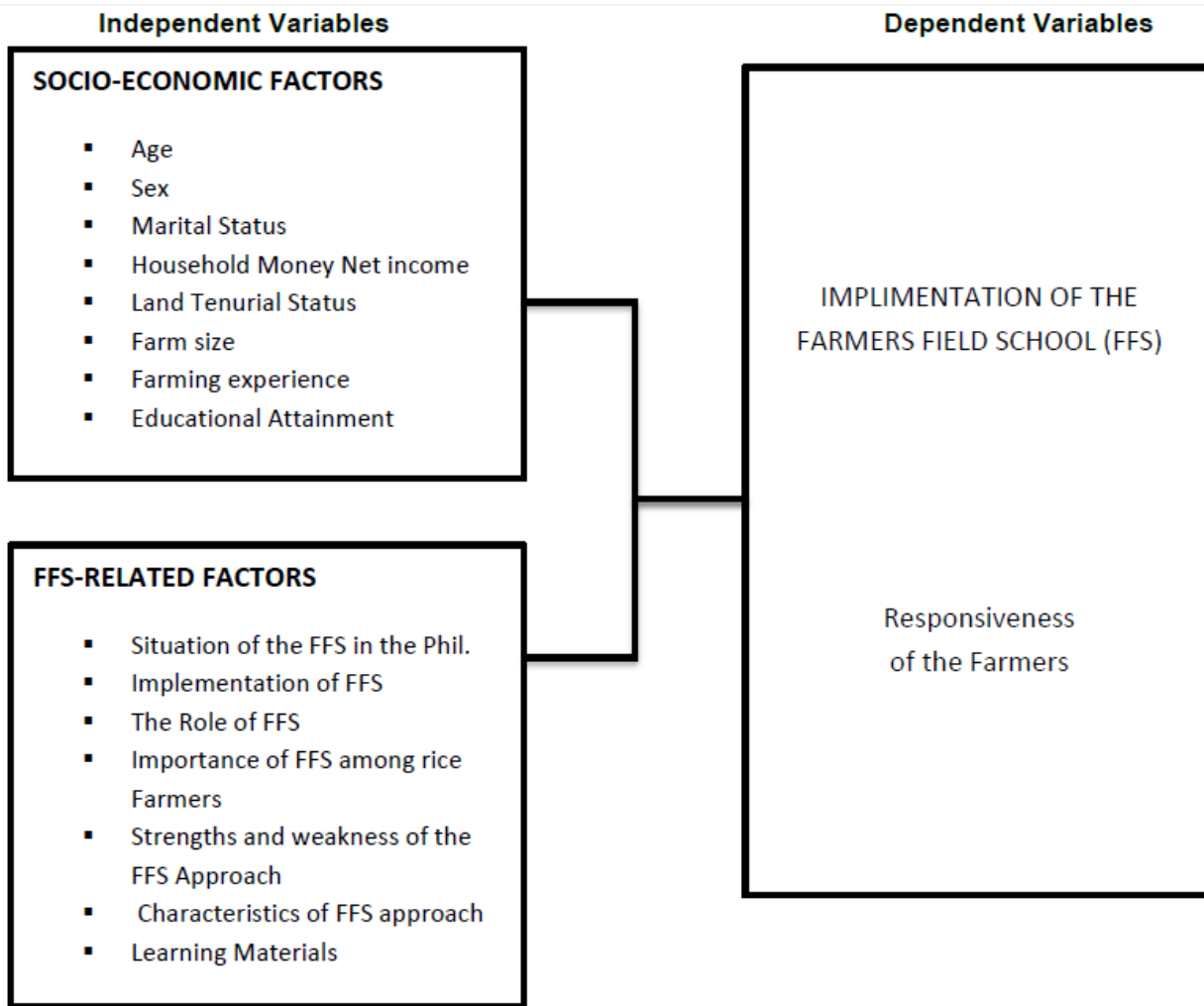


Figure 1. Schematic Diagram Showing the Conceptual Frame of the Study.

Statement of the Problem

The researcher aimed to evaluate the implementation of farmers field school among rice farmer at Calamba, MISAMIS, Occidental. Especially, the study sought to answer the following:

1. What is the socio-economic profit of the respondent?
2. What is the responsiveness of the respondent of the farmers field school?
3. How affective is the implementation of farmers field school among rice farmers?
4. What is the common problem encountered by the respondent in relation to the implementation of farmers field school?

Significance of the Study

The result of the study maybe used by both farmers and implementers to promote skills and empower their learning's process. Moreover, it is also

important to the farmers, field technicians, and extensions workers or change agent who are participants of the farmers field school (FFS). Besides, the effectiveness of this study will depend on the target beneficiaries, especially their adoption of new modern technologies in their farming activities. This study could serve as instrument to gain more understanding of farmers field school (FFS) which is an important ingredient to develop our farming system with higher standard. Lastly, the researcher with similar studies can use the findings of this study as one of their sources of information about farmers of Clarin.

Scope of Delimitation of the Study

This study will be focused on determining the status of the implementation of the farmers field school (FFS) among the rice farmers at Clarin, Calamba, Misamis Occidental. The respondent of the study was the participant of the farmers field school (FFS) conducted in the said site. The data gathered was limited only to their production during March until June 2015, or the dry season. Furthermore, the result of the study may

only be applicable or generalized in the case of the rice farmers in Clarin.

METHODOLOGY

Research Design

This study used the descriptive method of research. It is concerned with the description of the implementation of the farmers field school as perceived by the rice farmers at Calaran, Calamba, Misamis Occidental from March until June 2015.

Locale of the Study

The Municipality of Calamba is geographically located in the northern part of the province of Misamis Occidental, with the grid approximately 8°31'58" North latitude and 123°39'03" East longitude along the national highway leading from Ozamis City to Oroquieta City and to Dipolog City of Zamboanga del Norte. It is the center of the Municipalities considering that it is bounded by the Municipality of Plaridel on the North East; Municipality of Lopez Jaena on the South East; and Municipality of Sapang Dalaga on the West.

Calamba is the center of trade and commerce in the northern part of the province of Misamis Occidental. It is a town that lives in harmony with nature while striving for progress through agriculture and industry. It is also known as a center of trade and commerce in the northern part of the province of Misamis Occidental, Calamba is said to be the "Spring Paradise" in the north.

Calamba, like other places, "Has the passion for festivities and celebration". The town observed the "Sinulog Festival", which is held every third Sunday of January each year. Sinulog festival honoring the patron saint Santo Niño. It is spearheaded by the Roman Catholic Church and is celebrated by not only the town folks in the community but also people from the neighboring towns. It is also celebrating Menanjak Festival emphasizing the cultural and social heritage of the indigenous people of Calamba. These is done every February 14th of each year to celebrate its Foundation day Anniversary. Meneajak is Subanen word "love" and also for a simple reason it is celebrated on Valentine's Day. It is imperative for the organizers of the Festival to use the Subanen word because Calamba tries to preserve the cultural heritage of the indigenous people in the community. The local governments units recognize the Subanen as the original inhabitants of the municipality and bridge the cultural indifferences that exist in the constituents.

The province of Misamis Occidental is composed of 14 municipalities and 3 cities in which the capital is Oroquieta City. One of them is the municipality of Calamba which is situated in the first district of Misamis Occidental. The Municipality of Calambais composed of 19 barangays include the barangay of Clarin where the farmers field school was implemented

by the Department of Agriculture-Municipal Agriculture Officers with the cooperation of officials, farmers, and local government unit. Four months was devoted to lowland rice farming with thirty farmers as participants and meets once a week in a local field settling under the guidance of the facilitator. One of the requirements in the FFS is to have a demonstration area for the participants to have their own hands-on activities so that they can actualize their learned technologies in their respective individual farm slots.

The Respondents

The respondent of the study were 30 farmers of Calaran, Calamba, Misamis Occidental particularly known as "Subanen" farmers of Calamba during the farming period between March and June 2015.

RESULT AND DISCUSSION

This section shows the analysis and interpretation of data. The presentation is accordance to the sequence of the questions in the statement of the problem.

Part I. Socio-economic Profit of the Respondent

Age

Table 1 below present the frequency and percentage distribution of respondent according to their age. Data shows that half (43%) of the respondents where within the age group 41-50 years. This result implies that a great number of farmers can be considered fully matured and responsible, being already in the middle adulthood and adulthood stage and more knowledgeable in farming. However, Food and Agricultural Organization (FAO, 1997) claimed that younger farmers tend to be more adoptive that those who are already 50 and above. Surely, it can be said that almost all of the respondents where in the right age to operate their farm. Younger farmers tend to be more adoptive that those who are already 50 and above. Surely, it can be said that almost all of the respondents where in the right age to operate their farm.

Table 1. Frequency and percentage Distribution of the Respondents in term of Age

Age	Frequency (f)	Percentage (%)
20-30	1	3
31-40	2	7
41-50	13	43
51-60	11	37
61 and above	3	10
Total	30	100

Sex

Table 2 presents that less than two thirds (60%) of the respondent are female while only less than half (40%) of the respondent are male. This result implies that in the farm, majority of the farmers were females. However, Hidalgo (2001) noted counterparts prefer independent work outside farming. As the study revealed, it is apparent that farming is probably headed by men but dominated by female workers.

Table 2. Frequency and Percentage (%) Distribution of Respondent IN term of Sex

Sex	Frequency (f)	Percentage (%)
Male	12	40
Female	18	60
Total	30	100

Marital Status

Table 3 presents that more than three-fourths (87%) of the respondent are married. This means the entire respondent has families to fend for. It is revealed by the study . Bartlett (2005) underscore how marital status and the role of position in the family both exert significant influence of knowledge and technology.

Table 3. Frequency and Percentage Distribution of the Respondent in term of Marital Status

Marital Status	Frequency (f)	Percentage (%)
Single	2	7
Married	26	87
Separated	1	3
Widow/Widower	1	3
Total	30	100

Household Monthly Income

Table 4 shows that less than half (47%) of the respondent earn between ₱5,001.00 to ₱10,000.00. one third (37%) of them earn below ₱5,000.00. this indicates that the respondents do not earn a considerable large income. Banto (2015). maintained the economic level is subsistent, agricultural change is unlikely to occur. If the family income is considerably lower, it may then proceed to become a member of the organization to avail of modern technology and have greater yields in production. Ollila (2010) implied in her study that support should be made available in terms of access to capital to enhance technology adoption.

Table 4. Frequency and Percentage Distribution of the Respondents in term of Household Monthly Income

Household Net Income	Frequency (f)	Percentage (%)
Below ₱5,000.00	11	37
₱5,000.00 to ₱10,000.00	14	47
₱10,000.00 to ₱15,000.00	4	13
₱15,000.00 to ₱20,000.00	1	3
₱20,000.00 to ₱25,000.00	-	-
₱25,000.00 to ₱30,000.00	-	-
Total	30	100

Land Tenurial Status

Table 5 shows that a third (37%) of the respondent are lend tenants. Also, almost a third (33%) of the respondents are land owners. The findings show close distribution of respondent according to tenure status. In this aspect, Kabwe. et al. (2006) claimed that owners are more prone to make new decision to adopt new practices, while non-owners obtained permission first before trial or use of the innovation. According to Ollila (2010), the form of tenure affects adoption decision, not only through the wealth status effect, but also through willingness to invest in long quality of land.

Table 5. Frequency and Percentage Distribution of the Respondent in term of Land Tenurial Status

Land Tenurial Status	Frequency (f)	Percentage (%)
Owner	10	33
Tenant	11	37
Share	9	30
Total	30	100

Farm Size

Table 6 shows that more than half (53%) of the respondent have a farm with size less than a hectare while less than half (47%) of them have a1 to 3 hectares of farm. This clearly suggested that the respondent own only a small farm.

Studies conducted by Henk van den bergl and Bart GI knows (2006)shared that farm size is significantly related to adoption of modern technology. Bartlett (2005) concludes that there is positive relationship between farm size and the adoption of technology. Banto (2015) further found that farmer with bigger farmers have left the effect of the innovation. It is pointed out that those who have small farm tend to adopt new technology that farmers with larger farmers. Furthermore, they found that

farmer with bigger farmers have left the effect of the innovation. It is pointed out that those who have small farm tend to adopt new technology than farmers with larger farms.

Table 6. Frequency and Percentage Distribution of the Respondents Farm Size

Farm Siz	Frequency (f)	Percentage (%)
Less than one hectare	16	53
1 to 3 ha	14	47
4 to 6 ha	-	-
7 to 9 ha	-	-
10 ha and above	-	-
Total	30	100

Years in Farming

Table 7 shows that less than a third (27%) of the respondent has been farming for 7 to 9 years and 16 years and above. Moreover, less than a third (23%) of them has been in the farming business for 4 to 6 years. This reveals that the respondent considered farming as their source of income and a way of living. Theoretically, the experience of the farmers may influence the yield obtained. Since farmers have faced many problems in the past, they may have developed mechanisms to cope with that problem.

Table 7. Frequency and Percentage Distribution of the Respondent in term of Years in Farming

Years in farming	Frequency (f)	Percentage (%)
Below 3 years	3	10
4 to 6 years	7	23
7 to 9 years	8	27
10 to 12 years	4	13
13 to 15 years	-	-
16 years and above	8	27
Total	30	100

Table 9. Frequency and Percentage Distribution on Responsiveness of the Respondent towards Farmers Field School (FFS)

Indicator	Yes		NO		TOTAL	
	f	%	f	%	f	%
Do you think that through FFS you can improve your knowledge in term of rice farming?	30	100	-	-	30	100
Do you attend the FFS every session?	26	87	4	13	30	100
Did you cooperate with the other farmers field school participants?	27	90	3	10	30	100
Did you do your task in the field every day?	26	87	4	13	30	100
Did you exchange ideas with other farmers of FFS training?	29	97	1	3	30	100

Educational Attainment

Table 8 shows that two thirds (67%) of the respondents reaches secondary education or high school, while less than one-fourth (23%) of them only attained elementary education. This reveals that majority of the farmers did not pursue tertiary education. With regards to this, Hidalgo, et al. (2003) construed that educational attainment may affect the responsiveness of the farmers to ideas. They found that at least farmers at secondary level of education have greater probability of adopting new technology. However, the findings of Braun and Duveskog, (2008). stress that the first level of education has positive impact on the adoption of new technologies.

Table 8. Frequency and Percentage Distribution of the Respondents Educational Attainment

Educational Attainment	Frequency (f)	Percentage (%)
No formal education	-	-
Primary	-	-
Elementary	7	23
Secondary	20	67
College	3	10
Total	30	100

Part II. Attitude of the Participants towards Farmers Field School (FFS)

Table 9 shows that the respondent considers FFS helpful in term of improving their knowledge on rice farming. Almost all (97%) agreed that they do exchange ideas with other farmers. Many (90%) of them further disclosed that they cooperate with other farmers field school participants, while many (87%) as well attend the FFS session. This implies that the respondent participated and cooperates with the activities in farmers field school training.

Part III. Effectiveness of the Implementation of Farmers Field School (FFS)

Table 10 shows the perceptions on the effectiveness of farmers field school. The respondent agreed that the following have been well provided in the conduct of farmers field school (FFS): helps farmers learn how to organized themselves and their communities (AWM=4.70); sharpens the farmers ability

to make critical and informed decision (AWM=4.67); provide opportunities for learning by doing (AWM=4.63); teaches basic agricultural and management skills (AWM=4.63); and establishes coherent farmers group that facilitates the work of research and extension workers (AWM=4.10). Generally, the respondent attested to the effectiveness of the implementation of the farmers field school (FFS) in Clarin with the overall weighted mean of 4.11.

Table 10. Average Weighted Mean, Adjectival Meaning, Interpretation, and Rank Analysis on the Implementations of Farmers Field School

Indicator	AWM	Adjectival Meaning	Verbal Interpretation	Rank
FFs help farmers learn how to organizes themselves and their communities	4.70	Strongly Agree	Fully Implemented	1
FFS sharpens the farmers ability to make decisions	4.67	Strongly Agree	Fully Implementation	2
FFS provides opportunities for learning by doing	4.63	Strongly Agree	Fully Implemented	3
FFS teaches basic agricultural and management skills	4.63	Strongly Agree	Fully Implemented	3
FFS establishes coherent farmers group that facilitate the work of research and extension workers	4.10	Agree	Implemented	4
FFS works in collaboration with researchers	3.87	Agree	Implemented	5
FFS enhance the capacity of extension staff	3.80	Agree	Implemented	6
FFS serves as facilitators of farmers experimental learning	3.67	Agree	Implemented	7
FFS tends to strengthen existing group	3.57	Agree	Implemented	8
FFS may lead to the formation of new groups	3.47	Undecidable	Moderately implemented	9
Overall total	4.11	Agree	Implemented	

Legend

4.51 – 5.00	Strongly Agree	Fully Implemented
3.51 – 4.50	Agree	Implemented
2.51 – 3. 50	Undecided	Moderately Implemented
1.51 – 2.50	Disagree	Poorly Implemented
1.00 – 1.50	Strongly Disagree	Not implemented

Part IV. Problem Encountered by the Farmers

Among the listed problems, the following were encountered by many of the respondents, to wit: limited

budget (67%), inadequate resources and logical support (43%), time consuming process (43%), and lack of participation among farmers (40%).

Table 11. Problem encountered by the respondent in the conduct of Farmers Field School (FFS)

Indicators	Frequency (f)	Percentage (%)
Indistinct understanding of the concept and procedure all stakeholders	-	-
Inadequate resources and logical support	13	43
Improper identification of site areas/area	-	-
Improper identification and selection of participants	-	-
Improper supervision, monitoring and evaluation of the activities	-	-
Lack of participation among farmers	12	40
Lack of information by the farmers	1	3
Limited budget	20	67
No support and goodwill of the authorities at various levels	1	3
Poorly trained facilitators	-	-
Time consuming process	13	43
Undefined priority problem	5	17
Unorganized community that is dedicated/committed and willing	-	-
Unavailability of appropriate technologies	2	7
Weekly routine to attend is difficult	7	23

*Multiple Responses

SUMMARY OF FINDINGS

In term of socio-economic background, less than half (43%) of the respondent were aged 41 to 50 years old, less than two-third (60%) are female, more than three-fourths (87%) are married, less than half (47%) earn between ₱5,001.00 to ₱10,000.00. one third (37%) are land tenants, more than half (53%) have a farm of less than 1 hectare, less than one third (27%) have been farming for 7 to 9 years, and two thirds (67%) only attained high school education.

The respondent responsiveness towards farmers field school shows that all (100%) farmers agreed in the term of improving their knowledge on rice farming through FFS. Moreover, almost (97%) exchange ideas with other farmers; almost (90%) cooperate with other farmers field school participants; while more than three-fourths (87%) attend the FFS every session.

In terms of their participation on the effectiveness of farmers field school, the respondents agreed the following have been provided in the conduct of FFS : helps learn how to organize themselves and their communities (AWM=4.70); sharpens the farmers ability to make critical and informed decision (AWM=4.67); provides opportunities for learning by doing (AWM= 4.63); teaches basic agricultural and management skills (AWM=4.63); establishes coherent farmers groups that facilities the work of research and extension workers (AWM= 4.10).

Many respondent encountered problems such as limited budget (67%), inadequate resources and logical support (43%), time consuming process (43%), and lack of participation among farmers (40%).

CONCLUSIONS

Given the findings of the study, the following conclusions were arrived at:

1. Most of the participants in the conduct of farmers field school at Clarin, Calamba, Misamis Occidental are in the middle adulthood, are females, earn a meagre income, are land tenants, have been farming for a considerable long time, and only have basic education.
2. Farmer are responsive and participated in the farmers field school as they are willing to improve their knowledge in rice farming, communicate and cooperate with other farmers, and attend session in FFS regularly
3. Most of the farmers deemed FFS as an effective program as is provides opportunities by doing, teaches basic agricultural and management skills, enhance the capacity of extension staff, and works in collaboration with researcher. Furthermore, it tends to strengthen existing group, serves as facilitators of farmers experimental learning, may lead to the formation of new group, helps farmers learn how to organize themselves and their communities, sharpens the farmers ability to make critical and information-based decision, and FFS establishes coherent farmers group that facilitate the work of researcher and extension workers.
4. Despite the effectiveness of FFS, problem are still inevitable as many farmers encountered problems as they undergo FFS activities such as limited budget, inadequate resources and logical

support, time consuming process, and lack of participation among other farmers.

RECOMMENDATIONS

Based on the output of the study, the following recommendations are made:

1. The government should provide follow up to the farmers field school to sustain it.
2. The farmers should not only rely on traditional practices in rice farming and adopt modern ways of farming and not reject the newly introduced technology.
3. The farmers should adopt integrated pest management to avoid economic losses brought by pest and diseases.
4. There should be massive conduct of training of the farmers whenever a new technology is introduced coupled with information and education.
5. Agricultural agencies should conduct seminars/workshop to educate and enhance knowledge of the farmers regarding rice production, also discuss the topic so that the farmers will understand their existing situation and identifying their opportunities and constrains.
6. A policy to enhance the adoption of farmers field school by providing soft loan and incentive for the farmers by the Department of Agriculture so that farmers will be motivated to avail of the opportunities.

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