
Pengkajian Teknologi Usahatani Berbasis Jagung di Kabupaten Barito Selatan. Amik Krismawati


DAFTAR ISI

1. Pemanfaatan Pupuk Organik Majemuk pada Varietas Bawang Merah di Lahan Pasir Pantai Saat Musim Penghujan. Sarjiman dan Ahmad Musofie ......................................................... 1 - 8

2. Pengkajian Teknologi Usahatani Berbasis Jagung di Kabupaten Barito Selatan. Anik Krismawati ..................................................... 9 - 17


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Surabaya, September 2001
Redaksi
PARTICIPATORY EXTENSION: THE INTEGRATED COMMUNITY DEVELOPMENT ASSISTANCE INCORPORATION (ICDAI) EXPERIENCE
(Penyuluhan Partisipatori: Sebuah Pengalaman dari Organisasi Bantuan Pengembangan Masyarakat Terpadu (ICDAI)

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ABSTRACT

The objectives of this study were to get better understanding how farmers find themselves as local researchers, how farmers practice the concept of sustainable land use system and effect of ICDAI to the technological, social and cultural, economic, and political aspects. The study was conducted in ICDAI, one of NGO's in the Philippines, which has started introducing a model of participatory extension for more then 24 years. The primary data gathered in the farmers and key informants through a personal interview. Result of the study showed that with the farmers' heightened awareness of the environmental effects of what they are using and the long time effect it will bring to their children, the farmers are bent on to continue and improve and even share whatever technologies they have learned. Not only are their intellectual skills harnessed but also they make use a lot of their common sense.

INTISARI

Tujuan dari penelitian ini adalah untuk mendapatkan pemahaman bagaimana petani menerapkan konsep sistem penggunaan lahan secara berkesinambungan, serta untuk mengetahui pengaruh ICDAI terhadap aspek teknologi, sosial budaya, ekonomi dan politik. Penelitian dilakukan pada salah satu organisasi pemerintah di Filipina, ICDAI, yang telah menerapkan penyuluhan partisipatori selama lebih dari 24 tahun. Data dikumpulkan dari petani langsung serta informan luar melalui wawancara, dan selanjutnya dianalisis secara deskriptif. Hasil penelitian menunjukkan bahwa dengan kesadaran petani yang tinggi pada pengaruh lingkungan dengan apa yang mereka gunakan, pengaruh jangka panjangnya akan memberikan dampak kepada anak keturunannya, petani cenderung melanjutkan dan meningkatkan kemampuan serta saling berbagi teknologi yang mereka pelajari, tidak saja memanfaatkan kemampuan intelektualnya tetapi juga mereka mampu menggunakananya segala hal dengan fikirannya.

INTRODUCTION

Rationale

Sustainable Development has quite suddenly become a global issue. The ideas that have converged to produce this new concept are as varied as the definitions that have been put forward to define "sustainability". The essence of sustainability is the maintenance of natural resource productivity. For many resource-poor in the third world countries, the essence of "sustainability" is feeding people both today and tomorrow. For many resource-rich countries the essence of 'sustainability' is the preservation of natural resources, including not just agricultural resources, but local natural habitats and even flora and fauna in other countries. As various authors and institutions pointed-out (WCED, 1987; Elkins, 1993; and UNDP, 1994), sustainability development is not only an imperative of or applicable to the developing countries, but more so to "developed countries, where one quarters of the world's people consume three quarters of the world's resources" (UNDP, 1994 and Roseland, 1994). Beside of sustainable development, there is "sustainability" that become a topic for discussion recently, that is, sustainable agriculture which is defined as any agricultural principle, method, practices and philosophy that aims to make agriculture economically viable, ecologically sound, socially justifies and culturally appropriate.
and grounded on holistic approach (JSPS, 1989).

To integrate and make operational these different perspectives, we can propose the concept of "sustainable land use system". In this system, "farming system" will be used in the broadest possible sense and will refer to primary production activities such as forestry and aqua-culture, not just to annual crop or livestock production. Different institution focuses on different characteristic of the system. Some institutions focus on the need to use input that does not degrade the natural resource base. Some institutions focus on the development of systems that use natural resources, but at the same time regenerate their productive potential. Institutions that take an applied ecology approach (such as fisheries and forestry researchers) focus on the need to maintain system production at a level that does not exceed resource productivity. The traditional research approach has been focused on short-term economic viability.

This project tries to introduce and apply different characteristic of the system mentioned above to the farmers in order to feed them both today and tomorrow. One of the facts that is interesting to be highlight found in this area is that farmers still continue practice the farming system in which input that will not negatively affect the environment or systems that regenerate the natural resource base, even though it is not economically viable.

Important

Putting people first in development projects, it comes down to tailoring the design and implementation of projects to the needs and capabilities of people who are supposed to benefit from them. Furthermore, no longer should people be identified as "target group". Rather if we must speak of them abstractly, we should consider them as "intended beneficiaries". They are to be benefited, rather than "impacted". Consistently, in order to meet their needs, they have to be actively involved in any projects’ activities such as planning, implementing, monitoring, controlling and evaluating.

Since the farmers are intended beneficiaries, they have to be decision-maker of the project, and the consequence is that they should be local researchers. As local researchers, they will find information needed in developing their own natural resources. On the other hand, professionals such as researchers, extension workers, planners function as motivators only. They motivate the farmers in a such model approach in order that the farmers practice the sustainable land use systems. To be so, as a professional, ICDAI, one of the famous NGOs in the Philippines, has started introducing a model of participatory extension in Infanta 24 years ago.

So far, ICDAI’s projects are successfully adopted by the farmers. It is indicated by some indicators which are as follows:

1. Internationally, this project is known as a good pilot project of participatory extension. Therefore, it is used as a field laboratory by many.
2. Many farmers adopted the technology being introduced.
3. A lot of resources were being generating
4. There are positive changes of the peoples’ attitude and peoples’ values.

As researchers, as extension workers and especially as students who studying participatory extension, are necessary to have enough knowledge and skill about this area not only theoretically but also practically. To analyze ICDAI’s experiences, is one of the way to meet our need. Therefore, this activity is very significant for us.

B. Objectives

1. To get better understanding how farmer find themselves as local researchers.
2. Objectives of the project. The objectives of the project are as follows: To introduce and convince farmers practicing the concept of sustainable land use systems.

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new approaches to sustainable resource management.

1. Cultural Integrity: One of the greatest riches of a person that cannot be deprived of is the culture. It is culture that makes a person and a community. It is the identity of one's life. The ability to enhance the culture of the community through the development is a priority dimension of ICDAI in its work.

Area of Influence

ICDAI serves the Infanta-Polilo bloc. The services radiate from one barangay to another. Focus of services center around the low lying barangays of Infanta and the upland barangays of Infanta and General Nava.

ICDAI radiates its services from one main center unto another in Aurora province through its sister organization, the St. Francis Center - Integrated Area Development of Aurora, Inc. (SFC-IADA) located in Baler, Aurora.

METHODOLOGY

The study was conducted in Municipality of Infanta, the Province of Quezon, Philippines. The region has an area of 34,276 hectares and it is subdivided into the 35 barangays.

Particularly for this study, only 2 barangays were chosen as study site because relatively the physical conditions of these areas tended to be homogeneous. The other reason is that more or less there are similar treatments for those areas by ICDAI.

For purpose of this study, the following considerations were considered in the selection of the study site:

1. Sustainable agricultural through participatory extension have been applied by the farmers.
2. A barangay of more than five years since the ICDAI involved to the program.
3. Most of the population are local people.
4. Each household had the same approach which was granted by the ICDAI.
5. The presence of a cooperative organization in the barangay.

Based on the above mentioned guidelines, the following barangays were chosen as the study site: Barangay Tultudran and Barangay Pupuin.

In order to gather information on the farmers perception of the socio benefits that they derived from the ICDAI project, 4 key informants were personally interviewed through the use of a pre-tested questionnaire. The sample respondents were selected based on the position of the respondent in the community such as a leader, trainer, and also as a researcher.

We were able to get some information giving by Fr. Francis Lucas, the founder of ICDAI, to determine developmental changes in the program and the societies.

The study utilized both primary and secondary data. The primary data gathered in the farmers site was the basic source of data for descriptive analysis. It was collected through a personal interview of the farmers, the key informant belonging to the different barangay. The secondary data were adopted from other publications.

Since the information provided by the sample respondents for the analysis was based on memory recall, this might have caused memory bias. Therefore the cross-section data were gathered by the author were utilized in the analysis. For the macro impact analysis, the study mostly relied on secondary data. Due to lack of information particularly on the data's before the start of the project, it was not possible to conduct before and after impact analysis of this program.

RESULT AND DISCUSSION

Institutional Linkages

The following government agencies and institution were present in the area which were also involved in technology and information dissemination. These are:

1. The Department of Agriculture - Bureau of Agricultural Research (DA - BAR)
2. University of the Philippines Los Banos (UPLB)
3. Local Government Units (LGUs)
4. NGO - ICDAI

With this linkages, ICDAI helped the farmers to have access to the needed
information, technologies and other extension practices. However, farmers particularly the respondents said that they take extra care in the adoption of technologies because they have to evaluate these innovations based on their practice needs toward sustainability in agricultural production.

It is high time now that these agencies should have concerted efforts in the implementation of development programs to avoid confusion on the part of proper involved in development work. Policies should be reviewed in coordination with other concerned agencies toward the achievement of national goal.

Technological Aspect

1. Technological Practices

When the Masagana 99 was implemented in the 1970s, the farmers in Infanta were among the thousands of agricultural farmers who made use of the recommended Masagana 99 technologies. Since its implementation the farmers have been dependent on the fertilizers and use of chemicals to control pests and diseases.

It was only in 1991 when some farmers started to practice sustainable agriculture. Through the ICDAI the farmers learned, experimented and shared with the other farmers the different farming technologies. Their use of fertilizer was slowly decreased until such time that no fertilizer is being used. In place of the commercial fertilizer, the farmers now use organic fertilizer by using compost.

a) Composting. The ICDAI farmers underwent training on composting. They were introduced a microorganism to hasten the process of decomposition and this is trichoderma. But since trichoderma is an imported ingredient for the compost, the farmers tired to make compost without using trichoderma. Although it may take sometime for the compost to be utilized, the farmers said that they do not have to spend for the trichoderma. Farmers interviewed from Tuduran expressed their desire to own a composting machine and be learn to culture the microorganism. They however recognize the fact that it needs a laboratory to be able to produce the trichoderma. For the compost, the farmers use a mixture of one sack of rice straw for every sack of animal manure. The compost is applied in the field during plowing. The farmer in Pupuin uses alluvial soil.

b) Ecological pest management. ICDAI farmers apply ecological pest management in their farms. The usual practice is to plant vegetables along the paddies to protect the rice plants. The common pests in the farms are: golden snails, rats, hoppers and other flying insects. With the training that the farmers have undergone, they can recognize the friendly insects from enemy insects. The golden snails multiply easily so the farmers in Tuduran use banana or papaya leaves to gather the snails. The snails usually gather on these leaves, thus making it easier for them to remove the snails. One farmer said he uses "simutin" to kill the snails. He applies simutin by picking the snails one by one. In Pupuin, the farmer narrated that he gathers all the snails and feed them to his pigs. At first he would boil the snails and pull them out of the shell one by one, but because he has so many thing to do, he now gives everything to the pigs. Rats are found in Tuduran and Pupuin. The common practice of farmers from both barangays is to plant vegetables along the rice paddies. The rats will first eat the vegetables and once filled, forget about the rice. The Tuduran farmer plants okra, eggplant, string beans. Aside from the rats, these vegetables are also traps for the brown leafhoppers. In addition to this, the Tuduran farmer also determines the direction of the wind to be sure of where the vegetables will be planted. The insect pests from other farmers will be blocked by the vegetables. Since the farmer's house is within the his farm, he also grows vegetables. It is through these vegetables that the farmer observed that instead of attacking the rice plants, the insects attacked their garden vegetables.

c) Another strategy that the farmer from Pupuin does to control rats from eating the rice plants is to use grated coconut meat. He spreads the coconut on the soil.
for the rats to eat. Not satisfied with the
strategies that he is now doing, the Pupuin
farmer will plant cassava and sweet potato.
According to the farmer, the root crops when
they mature will be big enough and will really
fill the stomach of the rats. Thus, the rats will
not even look for other food to munch on.

d) Farming systems. The farmers used to
practice only mono cropping. They only
plant rice because this can be stored for
future use. With their practice of
ecological pest management, they are
also into livestock farming. Some of
them take care of pigs, chicken, and
carabao. They devote 65% of their
agricultural land to rice and 35% are
planted with vegetables.

2. Technological Dissemination
a) ICDAI level. In the delivery of extension
function of ICDAI, there are three
approaches being used: (1) integrated
approach, (2) cultural consideration, and
(3) participatory approaches. To ICDAI,
extension is research and research is
extension. These two important concepts
should always go together so that they
will be relevant and therefore will
success. The major activities being
done by ICDAI to disseminate the
relevant/appropriate technologies are
training and setting up demonstration
farms. Major crops being planted by the
farmers are the crops planted in demo
farm, e.g. rice. During training, the
farmers not just attend lectures but also
do hands on in the field. Pamphlets and
other reading materials are given to
farmers for further of future reference.
ICDAI has also a regular radio program
wherein they air appropriate technologies
for the farmers in Infanta.

b) Farmers Level. The ICDAI farmers
cooperators, though not all of the
farmers in the community are included,
have their own way of communicating
each other. They conduct forum/meeting
even without the presence of ICDAI staff.
Farmers who have been trained also
served as trainers among other farmers
within their community and even in the
other nearby communities. These farmer
leaders who serve as trainers have their
own demo-farm related to the technology
they are disseminating, for example, the
modified technology or composting using
rice straw and animal manure which are
mixed in the field during plowing to serve
as organic fertilizer. Another example is
the technology or ecological pest
management which the farmer leaders
themselves act as trainers. The ICDAI
farmers cooperators are increasing in
member. Membership is voluntary
because it is one of the philosophies of
ICDAI, not to be prescriptive or not to
impose. It will just create dependency.
Farmers especially the marginalized ones
are not risk takers. They may have the
attitude to wait and see. Once they have
seen the demo farm of other farmers,
they are convinced to practice the
technology being introduced to them.
Others joined the organization because
they value the feeling of belongingness.

c) Other Agencies. The LGUs and DA have
their own extension function. They do
conduct training on agent technologies
but one thing very visible among the
farmers in Infanta especially the ICDAI
cooperator is that they are using their
common sense. They do not just accept
the technologies but rather they do some
evaluation serially, environmentally,
culturally and economically. They modify
the technologies extended to them based
on the resources available within their
means. They have developed the attitude
of self-help and not be dependent to
others in the future. An example to this
attitude of the farmers was the
modification they did to the composting
of rice straw. Their point of modifying it
was that trichoderma is not within their
means, meaning it is not available in their
community. Thus, producing a compost
is dependent on the availability of
trichoderma. Hence, they thought of
modifying the technology by removing
trichoderma because they do not want to
be dependent on trichoderma producer.
Social and Cultural Aspect

The ICDAI has influenced and given so much motivation for the farmers for training to improve economic condition through organic farming. It is quite evident that farmers prioritize non-economic, i.e., the aspiration to provide better life to the family through health hazard free farming.

Belief and rule of behavior of farmers systems are based on religious beliefs. It is astonishing to learn that ecological pest management is based from the Bible where a farmer stated some verses from holy scripture.

It is also evident from farmers the feeling of prestige being a member of the ICDAI. We learned that their participation in the programs and activities of the organization have helped them develop their sense of identity, confidence and fulfillment.

Through ICDAI farmers are provided the opportunity to discuss with local and international expert heir problems thus make them a part of the research and development system.

Women are also recognize as essential part of the farm labor force and the wide major influence on the farmers decision making.

Economic Aspect

In Infanta's stage of development, agriculture has made a number of major and interrelated contributions to the process of socio-economic development. Firstly and foremost, it contributes to provide food for a growing population and raw materials for small industrial sector. Secondly, it provides productive employment opportunities and income for the bulk of the population residing in the rural areas. Thirdly, it plays a crucial role in alleviating poverty and malnutrition through a structure and pattern of production that allows small farmers and landless agricultural workers to share in the benefits of agricultural growth. Finally, agriculture contributes to improving the balance of payments situation - through increased foreign exchange earnings, saving foreign exchange and reduce dependency of the economy on foreign sources of food supply (Quantitatively, it can be seen by detail in the report of Fr. Francis B. Lucas: Costs and Return Analysis Mario Sanchez, November 1997).

According to the General Information of Infanta's Municipality, the potential for agricultural in this area has the following farm area: 1,562 has of rice farm, 1,738 has of Coconut farm, 23,5 has of Corn farm and 38,5 has of vegetable farm.

Political Aspect

There seems a good relationship on the staff of ICDAI to the local officials. They (officials) recognize the contributions of the farmers to the sustainable agriculture in Infanta. It was gather that the local leaders adopted the programs of ICDAI in agriculture sector.

Some programs of government like the Department of Agriculture are not so integrative to that of ICDAI. One of the flagship program is sustainable agriculture with less or no use of commercial fertilizer or pest control.

It is a hope that people in government having similar program with Non-government organization like ICDAI should endeavor to work closely to avoid confusion to the farmers. The sustainable agriculture had reach the awareness and enthusiasm of farmers which the government be happy. Otherwise, non-support to sustainable agriculture with organic approach is far better than the commercial input which is part of capitalist designed purely for profit and annihilating remaining resources the third world have in order for them to remain dependent and poor.

CONCLUSION AND RECOMMENDATION

The farmers have given value to the knowledge that they have acquired from their training courses. They do not just apply these technologies but make modifications when necessary. With the farmers' heightened awareness of the environmental effects of what they are using and the long time effect it will bring to their children, the farmers are bent on to continue and improve and even share whatever technologies they have learned. Not only are their intellectual skills harnessed but also they make use a lot of their common sense.
With their sincerity in using the appropriate technology for them, they will surely be good examples to the farmers who are not yet using the ecological pest management and those who have not been experimenting on what they are doing. It may take sometime before they have convince other farmers, but with what they are doing they will win them to their side later on because their efforts are not only for today but also for the future.

As of now the farmers' knowledge are concentrated on rice farming. They should also be introduced other technologies that relate to what they are doing like livestock farming, vegetable growing and the technologies for each of the crops.

LITERATURE CITED


