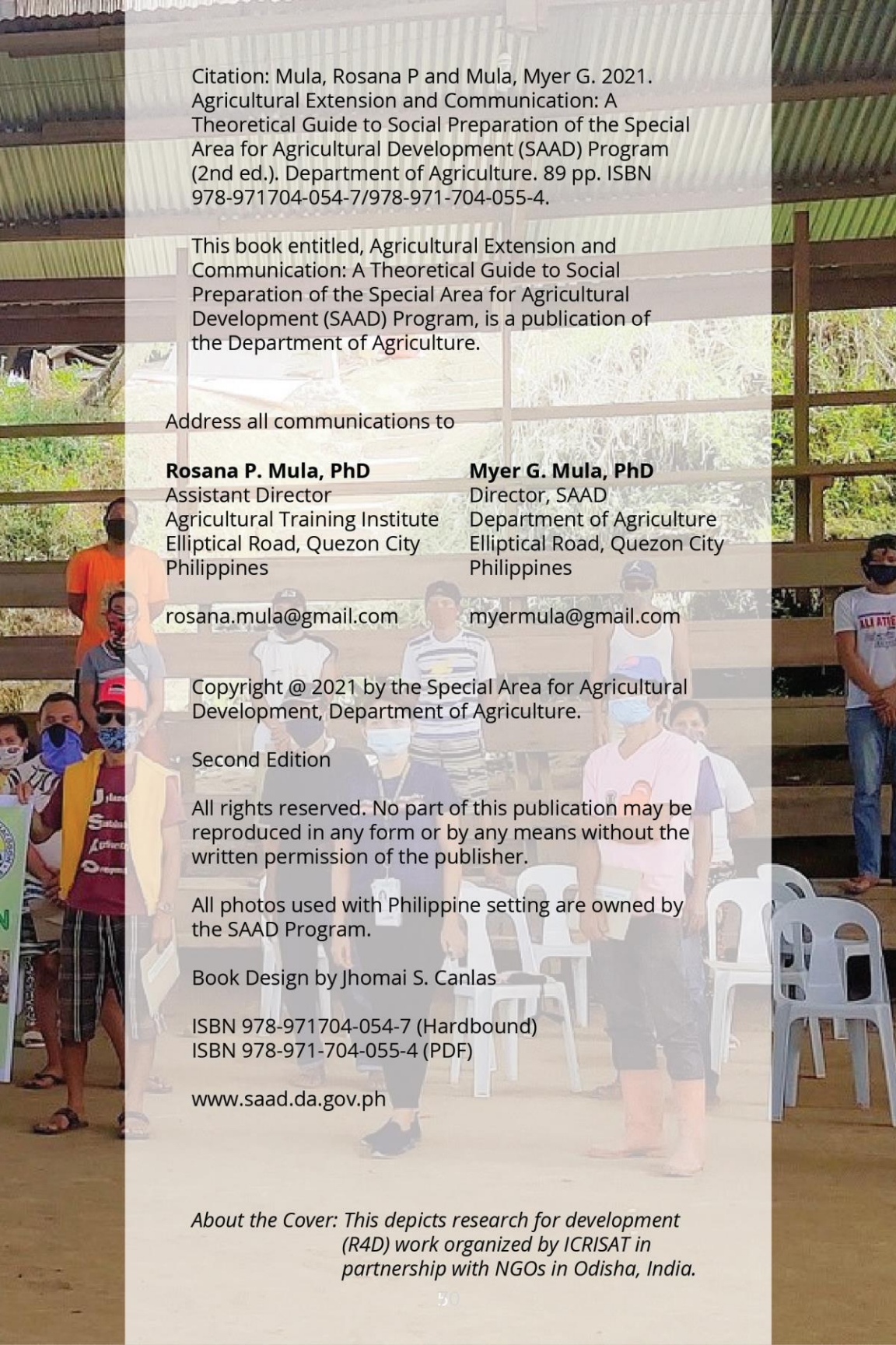
# AGRICULTURAL EXTENSION AND COMMUNICATION:

*A Theoretical Guide to Social Preparation of the Special Area for Agricultural Development (SAAD) Program*

**Rosana P. Mula**
*and*
**Myer G. Mula**

*Second Edition*


*Native Chicken Production Training in Talacogon, Agusan del Sur*



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*About the Cover: This depicts research for development (R4D) work organized by ICRISAT in partnership with NGOs in Odisha, India.*

# FOREWORD

Extension providers, especially those that are agriculture-based, must have both strong theoretical preparation and practical knowledge. Institutional impact of extension is determined by the stakeholders' ability to share and upscale knowledge. Upscaling means that potential adopters are not only aware of the technology but should be willing to implement it. Among extension workers, they are tasked not only to deliver, but should also make those that they intend to serve (e.g. farmers, fishers, housewives, and out of school youth) utilize the innovation.

As extension workers cum educators, there is the need to think and carry out strategies to make the learning process inclusive and fulfilling. This brings to light the importance of crafting good learning materials that learners can refer to and even enrich themselves. Hence, this reference material on Agricultural Extension and Communication that dwells on the basic theories and concepts of extension drawn from secondary literatures but deepened with insights of the authors based on their actual experiences in research and development works.

The authors' contribution in taking this initiative for enlivening the reference material is a head start for others in the Department, Local Government Units, and Universities to continuously improve the teaching pedagogy through content management of instructional materials. To truly empower learners, there is the need to unceasingly provide them with new knowledge and approaches.

**Rosana P. Mula, Ph.D.**

**Myer G. Mula, Ph.D.**

*Fiberglass Reinforced Plastic Boats Fabrication Training in Caluya, Lauan-an, and Sebaste, Antique*

*Specialized Training on Upland Rice Production in Jimalalud, Negros Oriental*

# ABOUT THIS BOOK

Juxtapose with any form of community development work is extension service. This is inevitable especially in the field of agriculture. Rural and even urban dwellers are continuously in need of advice and information to address issues and constraints of their farm-related livelihood system. This explains the requisite of basic principles in doing extension work where this will form part of their future professional responsibility. As said, covered in this document are extension principles, theories related to diffusion process, methods and basic teachings for community work.

Profound thanks to authors of the secondary sources of information cited in this instructional material, who provided the building blocks of agriculture extension service. The theories and other information obtained from these sources served as the bases and points for elaboration as well as examples discussed in this material. Interspersed are first-hand experiences of the authors during their research for development (R4D) work in past assignments, locally and overseas.

While the primary concern is to provide stakeholders with a reference on the basics of extension education process, the authors encourage practitioners given their experiences and insights to enhance this material. This will ensure relevance of the material for extension workers and other interest groups or users.

*Mushroom Production Training in Brgy. Calawag, Magsaysay, Occidental Mindoro*

# ABOUT THIS AUTHOR

**Dr. Rosana P Mula** is a former Social Scientist and Learning Coordinator of the Capacity Building Unit of the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Patancheru, Telangana, India. Her 10 years at ICRISAT was devoted to research on impact assessment of hybrids, community watersheds and learning experiences, gender-related studies, and ICT-mediated extension. As Learning Coordinator, she was responsible for the institutionalization of guidelines in the recruitment of learner-participants, crafted partnerships between and among state universities and colleges and national agricultural research and extension systems worldwide, developed course materials including on-line courses and their virtual administration, organized training courses/workshops. Other experiences include proposal development, management of extension activities, and teaching in graduate and undergraduate levels in state universities. To date, she is the Assistant Director of the Agricultural Training Institute (ATI) of the Department of Agriculture.

**Dr. Myer G Mula** is a former Senior Scientist for Seed Systems at the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Patancheru, Telangana, India. Aside from conducting research, Dr. Mula is the Project Investigator of a five-year (2011-2015) project on Introduction and Expansion of Improved Pigeonpea Production Technology in Rainfed Upland Ecosystems of Odisha, India and the three years project on Tropical Legumes II which covers India and Africa. The thrust of these projects, aside from research, is towards the development and strengthening of formal and informal seed production and delivery systems to ensure smallholder farmers quality seed of improved-preferred varieties and hybrids of pigeonpea, chickpea and groundnut. He has published several journal articles, monographs and books and mentored MSc & PhD scholars, research fellows, and interns from different countries. His experiences also include proposal development and project benefit and monitoring and evaluation. As a concurrent Program Director of DA-SAAD, he is also the OIC-Director of the Bureau of Agriculture and Fisheries Standards (BAFS). In addition to his designations, he is the Special Adviser for Research and Seed System of the Bureau of Plant Industry (BPI).

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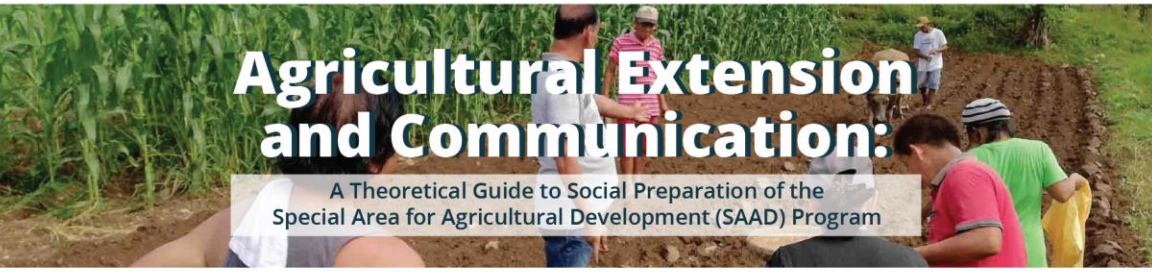


# Agricultural Extension and Communication:

## A Theoretical Guide to Social Preparation of the Special Area for Agricultural Development (SAAD) Program

## Introduction

The term extension is open to a wide variety of interpretations. Every extension agent probably has his/her own understanding of what extension is. This understanding is often based on the agent's past experience and involvement in a particular type of extension service. This implies that there is no single definition of extension. Extension is a dynamic concept that cannot be precisely defined but describes a continuing and changing process.

Extension is an informal educational process directed towards the provision of advice and information to help rural communities solve their problems. Extension is a process of working with rural people in order to improve their livelihood system. This involves helping farmers to improve the productivity of agriculture and also develop their abilities/skills to direct their own future development.

The objective of extension is to change farmers' outlook toward their difficulties. Extension is concerned not just with physical and economic achievements but also with the development of the rural people themselves (change in attitude, skill/practice, and perception). Extension also aims to increase the efficiency of the family farms, increase production and improve the standard of living of farm households. Extension agents, therefore, discuss matters with the rural people in order to help them gain a clearer insight into their problems and also to decide how to overcome these problems.

## Concept of Extension Service

Extension service in agriculture is indispensable and it offers more than just expert assistance in improving production and processing. It enables the flow of information and transfer of knowledge and application of scientific findings. These activities are performed according to rules, which regulate establishment and functions of organization, goals and fields of operation, determination of approach to execute extension activities and the obligations and rights of extension agents.

Extension service has undergone transformation, which in turn, influenced the application of certain scientific achievements into practice. Agricultural

extension is regarded as an important agrarian-political instrument of the state, which is the impetus for the development of agriculture. This brings to light the importance of agricultural extension service primarily geared towards effective and efficient dissemination of knowledge and build-up of agricultural skill competency.

Extension service is a basic element of every program/project geared to bring about change in the rural areas. Especially in developing countries, pluralistic extension service that recognizes public-private partnership including local people is an important administrative structure to bring about or direct programs and projects for change.

## Scope of Activity and Tasks of Extension Service

The primary objective of agricultural extension service is the efficient and effective transfer of technology to improve livelihood system of rural communities (Figure 1).

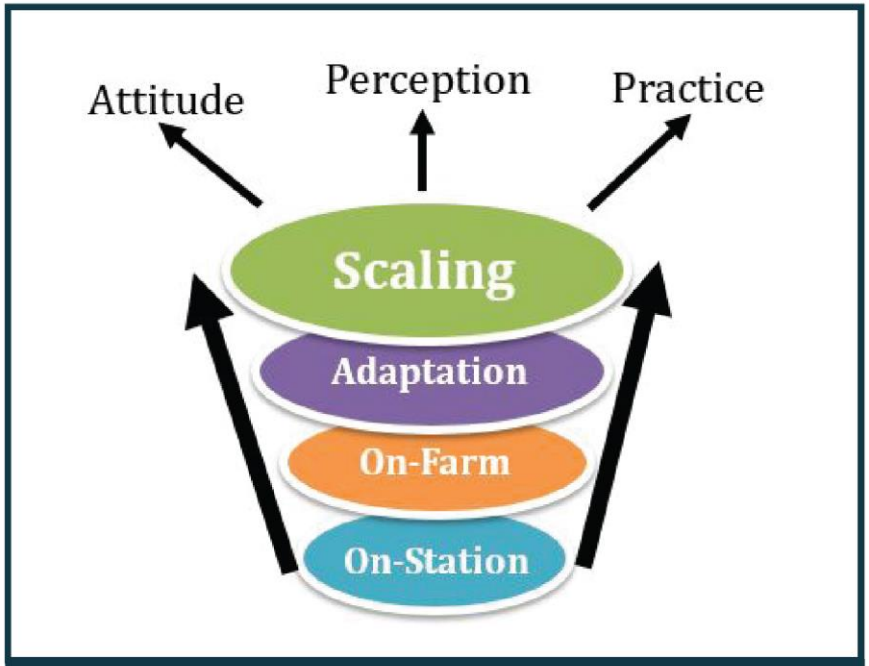



*Figure 1. Process of scaling up and out*

Most often than not, technologies are developed on-station. During on-farm stage, actors (like farmers) are tasked with roles. This is also the stage when appreciation of technology and skills build up happens. The learning pedagogy in adaptation is based on practical applications and customization.

At this stage, the interests and needs of the learner (e.g. farmer) and of the environment are given importance to allow self-learning and self-actualization. It is the stage where the technology is assessed for upscaling (including scaling-out).

In a nutshell, the key concern is to gain new information, develop new abilities, and apply insights directly in the farming system. Extension work is concerned with the following:

- Developing new guidelines for micro, small and medium enterprises (MSMEs) and agricultural holdings. This includes investments, business plans, plan for development of regions for agricultural production and processing, and additional activities.
- Assisting in the adoption of measures of agrarian policy (assistance in submission of requests and documents for subsidies and other calls, providing information and keeping records).
- Assisting in organization for primary production and other forms of producer associations.
- Building capacity of agricultural producers for more successful managements of the farm holdings.
- Directing rural development of the local community.
- Preserving natural resources and environment (sustainable development).
- Directing and harmonizing production with natural resources and market demands, as well as develop entrepreneurship in agriculture in rural areas.
- Encouraging the formation of producer associations and other social groups in the villages.

The aforementioned tasks can be realized if the service is keeping up with latest scientific results and the socio-economic trends such as market demands, knowledge and experience of scientific, research, and experts of educational institutions in agriculture. Extension service has to establish good cooperation and functional links with said types of institutions.

# UNIT 1

## Introduction to Extension Education Concepts

**Agricultural extension** refers to diffusion of useful and practical information in agriculture and allied subjects (Homemaking practices).

**Diffusion Theory** refers to the process by which an innovation is adopted and gains acceptance.

### Factors that influence Diffusion Process

1. Innovation
2. How the innovation is communicated
3. Time
4. Nature of the social system into which the innovation is being introduced (Rogers, 1995)

## Theories of Diffusion

**1. The Innovation Decision Process theory (Rogers, 1995)**

- States that diffusion is a process that occurs over time and can be seen as having five distinct stages:

a. ***Knowledge.*** This could be referred to also as the awareness stage where a person knows of the existence of an idea, the practice or technology. However, he lacks the adequate information. In technology promotion, the first stage is to inform people and make them aware.

b. ***Persuasion.*** This could be the stage where a person is attracted to the technology. Such interest will entice him to know more about the technology – What it is? How much it costs? Where to acquire the needed inputs? How much will the yield be?

c. ***Decision.*** An individual shows marked interest in the technology as it applies to him, his family, or his work. His tendency is to obtain or ask more information regarding the technology by obtaining detailed information from researchers, technicians or extension workers; buying the product and assessing its merit and even inquiring from others who have tried the technology.

d. **Implementation.** This could be referred to as the trial stage where the individual. tried and experiments in small scale the new technology after weighing the advantages and risks involved.

e. **Confirmation.** There is adoption or use of the technology if the person is convinced of the technology's relative advantage. There is satisfaction on the part of the user.

- According to this theory, potential adopters of an innovation must learn about the innovation, be persuaded as to the merits of the innovation, decide to adopt, implement the innovation, and confirm (reaffirm or reject) the decision to adopt the innovation.

**2. Individual Innovativeness (Rogers, 1995)**

- States that individuals who are predisposed to being innovative will adopt an innovation earlier than those who are less predisposed. Figure 2 shows the bell shaped distribution of Individual Innovativeness and the percentage of potential adapters theorized to fall into each category. On one extreme of the distribution are the Innovators. Innovators are the risk takers and pioneers who adopt an innovation very early in the diffusion process. On the other extreme are the Laggards who resist adopting an innovation until rather late in the diffusion process.

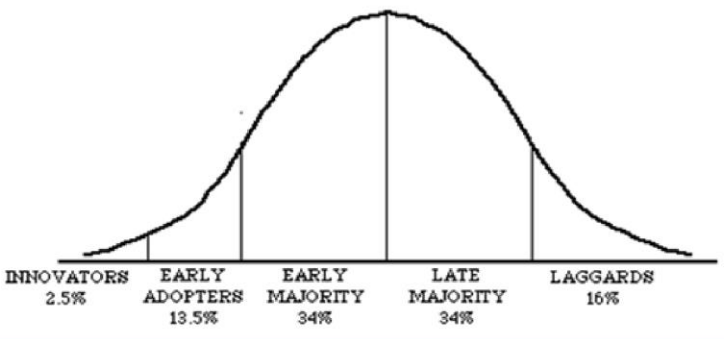



*Figure 2. Bell-shaped curve showing categories of individual innovativeness and percentages within each category*

**3. Rate of Adoption (Rogers, 1995)**

- States that innovations are diffused over time in a pattern that resembles an s-shaped curve. Rate of Adoption theorizes that an innovation goes through a period of slow, gradual growth before experiencing a period of relatively dramatic and rapid growth.

- An example of how the rate of adoption might typically be represented by an s-curve is shown in Figure 3. The theory also states that following the period of rapid growth; the innovation's rate of adoption will gradually stabilize and eventually decline.

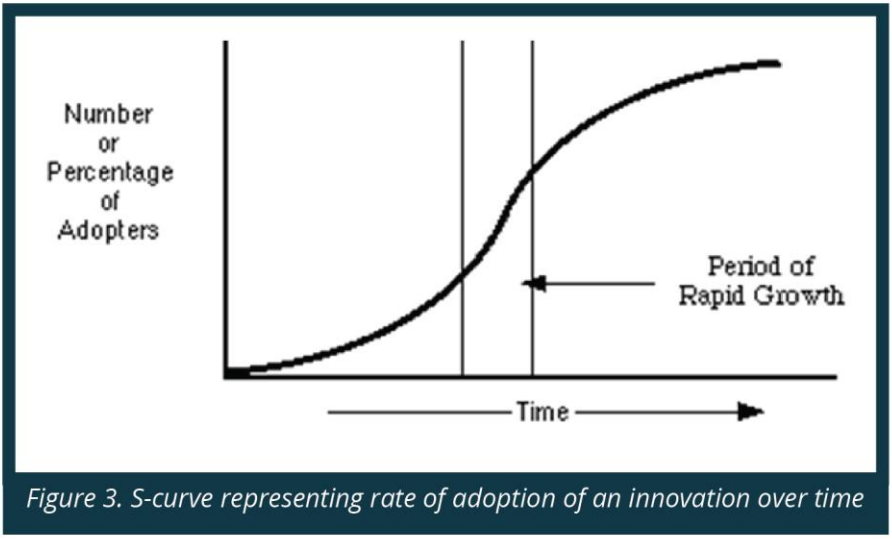



*Figure 3. S-curve representing rate of adoption of an innovation over time*

**4. Perceived Attributes (Rogers, 1995)**

- States that potential adopters judge an innovation based on their perceptions in regard to five attributes of the innovation. These attributes are:

    a. Trialability
    b. Observability
    c. Relative Advantage
    d. Complexity
    e. Compatibility

- The theory holds that an innovation will experience an increased rate of diffusion if potential adopters perceive that the innovation (Case 1):

    a. Can be tried on a limited basis before adoption;
    b. Offers observable results;
    c. Has an advantage relative to other innovations (or the status quo);
    d. Is not overly complex; and
    e. Is compatible with existing practices and values.

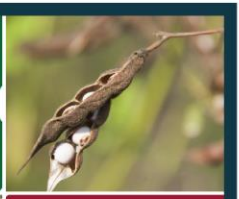
## *Case 1. The Adoption Process of ICRISAT Pigeonpea Improved Varieties*

a. **In retrospect: On-station Pigeonpea Crop Improvement Research at ICRISAT Pigeonpea Technology.** Development of inbred technology started at ICRISAT in 1974 that involved breeding of varieties for high yield, different maturity period (early, medium, long duration), resistance to pests and diseases, and growth habit (non-determinate and determinate type). A total of 41,784 germplasm accessions are stored in the Center's genebank for breeding purposes.

b. **The package of technology.** It is vital that quality variety seed is produced in greater quantities economically and with ease. ICRISAT's experience has it that seed production requires hot spots for successful production. In addition, agronomical and ecological factors responsible for enhancing seed set were also studied by ICRISAT. Figure 4 is an ICRISAT brochure summarizing the essentials of the package of technology.

Introduction and Expansion of Improved Pigeonpea (*Arhar*) Production Technology in Rainfed Upland Ecosystems of Odisha

# Pigeonpea Production and Management



## 1. Location

| | |
|---|---|
| Isolation | A minimum of 300 m for variety and 500 m for hybrids away from other cultivars is required to avoid out-crossing. |
| Land | Land has to be well prepared and inclined to avoid water-logging. |
| Irrigation | Area must have source of water to irrigate during critical growth period of the crop. |
| Pollinators | Presence of insect pollinators during flowering stage. Bees are the most effective pollinators. The more population of insect pollinators on pigeonpea crop will provide a good or intensify the production of seeds especially in hybrid seed production. |

## 2. Cultural Practice and Management

| | |
|---|---|
| Land Preparation | The field should have loose tilth and in ridges (good drainage) |
| Fertilizers | Apply 100 kg/ha di-ammonium phosphate (DAP) |
| Spacing | Line sowing is must as it facilitates intercultural operations, roguing and field inspection. For seed production of hybrids, 4:1 and 3:1 row ratio of A- x B/R-lines is recommended. Spacing recommendation of 75cm x 30cm for normal sowing (June); and 60cm x 30cm during late sowing (Mid-August). For commercial purposes, 75cm x 30cm (variety) and 150cm x 30cm (hybrids). For Early, 45cm x 20cm. |
| B- and R-lines | Based on the days to flower, the need to sow in two schedules the B- or R-lines for supplying continuous pollen to A-line. Difference in the first sowing date will be 12-15 days. Row ratio proportion of A- x B/R-lines must be sown simultaneously. The second sowing of B/R-lines in the front, back, left, and right rows should commence 12-15 days after. |
| Sowing | 2-3 seeds/hill. |
| Seed rate | 8 kg/ha for variety and 4 kg/ha for hybrids. |
| Seed treatment | The seeds should be treated with fungicides (i.e. thiram + carbendazim) before sowing. |
| Thinning | Retain 1 plant/hill after 3 months to have a good branching and productive flowers. |
| Weeding | Keep the crop free from weed competition. |
| Roguing | Roguing of off-types during vegetative, flowering, podding stage is required. (i.e. ICPH 2671- purple stems, un-even height, flowers should be of pure yellow without any shades or streaks of red color). Also roguing is required when plants are infected with diseases. |
| Pests | Adoption of IPM practices and if required application of chemical (i.e. endosulfan; indoxacarb or spinosad) is used as and when needed. Monitor insect pests especially maruca and helicoverpa. Start spraying during flower initiation to prevent newly hatched eggs of maruca, helicoverpa or any other destructive insects using systemic insecticide. Continuous spraying if deemed necessary. |
| Diseases | Pull out infected plants to avoid spread of disease and spray fungicide if deemed necessary. |
| Irrigation | Irrigation facility is required in seed production. Irrigate the crop especially during flower initiation and at the time of pod development. At least 2-3 irrigation is required. |
| Harvesting | Harvest when 75-80% of the pods are matured. |
| Seed processing | The dried seeds should be graded and free from plant parts, soil particles, stones, weed seed, other crop seed, shriveled, broken, or damaged seed. |
| Seed storage | Seed moisture level is 10 - 12% for short-term storage (up to 8 months). After drying, the seed should be stored in polythene-lined gunny bags or in safe storage structures (metal bins or earthen containers. Bruchids: Seed bins should be fumigated with commercially available fumigants (ethylene dibromide or phosphine). |

ICRISAT Science with a human face
International Crops Research Institute for the Semi-Arid Tropics
Government of Odisha
Funded by DoA and RKVY Sub-scheme Govt of Odisha
IMCD Inclusive Market Oriented Development • Innovate • Grow • Prosper

*Figure 4. Brochure (Package of technology)*

## c. The adoption process of pigeonpea in Odisha, India

### Background information

While 70% of the population lives in the rainfed upland ecosystem of Odisha, around 85% of the workforce depends on agriculture. There are about 8.7 million hectares of agricultural lands in the state of which 70% are rainfed. Production of pulses has been reduced to 56.4% of the total agricultural area, in the last ten years. The districts of Rayagada, Kalahandi, Boudh, Bolangir and Nuapada were identified as extension sites of ICRISAT for the introduction of pigeonpea because of their dry and rainfed ecology. About 53,350 hectares of total tillable area is suitable for new high yielding pigeonpea varieties and hybrids in the five districts. The project objective was to introduce and expand the production of high yielding pigeonpea varieties and hybrids by means of adaptation, selection and promotion through a farmer participatory approach.

Pigeonpea is mainly grown in rainfed upland areas and is one of the most important pulse crops of the state. It is an affordable source of protein (22-24%) and contains carbohydrates, minerals and vitamins. Pigeonpea, which is also a good source of essential amino acids, can be an excellent crop to promote food and nutritional security in Odisha. However, Odisha's productivity is low at 415 kg/ha compared to the national average of 700 kg/ha. It also has a very low seed replacement ratio of 2-3%. A large section of farmers in the rainfed upland ecosystems of Odisha have remained isolated from improved cultivars and management practices of pigeonpea for

for various reasons. There is ample scope for the expansion of high yielding, and short and medium duration pigeonpea varieties in the rainfed areas for the development of sustainable livelihoods. It is mainly for these reasons that this project was implemented.

The project 'Introduction and Expansion of Improved Pigeonpea (Arhar) Production Technology in the Rainfed Upland Ecosystems of Odisha' was funded by the Department of Agriculture and Food Production, Government of Odisha, India, through the Rashtriya Krishi Vikas Yojana (RKVY) sub-scheme 353 (No. 15(03)/19/2011). The project was for a period of 4 years from 2011 to 2015 with a total budget of Rs 10.288 crores (US$2.29 million); implemented by ICRISAT in August 2011.

**Strategy and approach**

- The project is farmer-driven, farmer-implemented, and farmer-owned.
- The researchers and extensionists play a catalytic and guiding role through the provision of technical options to farmers and by helping them to make appropriate choices.
- The research and development process aims to integrate locally-adapted improved cultivars of pigeonpea, improved crop production technologies, and crop management practice.

**d. Extension Methods: Local and Global adoption**

**Odisha Seed Delivery System Model.** The 'one village – one variety' concept was initiated because the formal seed sector cannot supply huge quantity of quality seeds. The project started with the identification of villages and the provision of one farmer preferred variety suited to a specific soil type. A total 8,493.14 tons of seeds where produced from seed production (SP) of various seed class (1,609.93 tons) of breeder, foundation, certified and truthful label; and the improved pigeonpea production technology (6,883.21 tons) from 2011 to 2013 benefitting 25,708 smallholder farmers including 1,947 female farmers. The seed village concept solved the problem on the lack of quality seeds to sustain the requirements of smallholder farmers.

**Seed delivery system:** A must in agricultural development project. Around 80-90% of all planting materials used are largely sourced from farmers' own-saved seed. Farmers save seeds of local landrace and use this continuously for about 2-4 years (Figure 5).

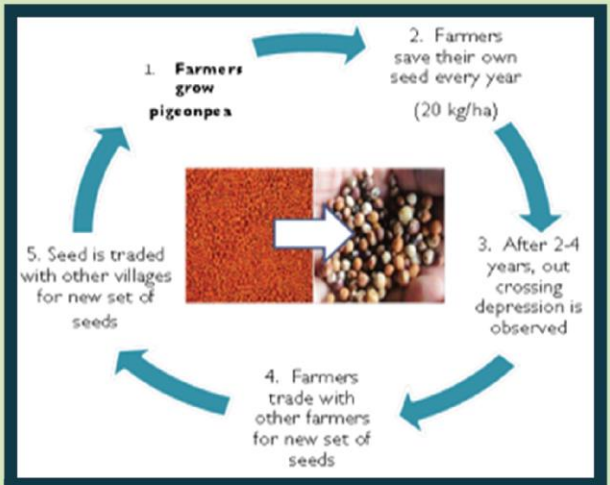



*Figure 5. Farmer Seed System Model*

The benefit of partnering with the Seed Certifying Agency, OSSOPCA, necessitated the strengthening and institutionalizing of the informal seed production system (Figure 6). The State Seed Corporation through the directive of the DoA is tasked to secure all the remaining good quality seeds from farmer seed growers.

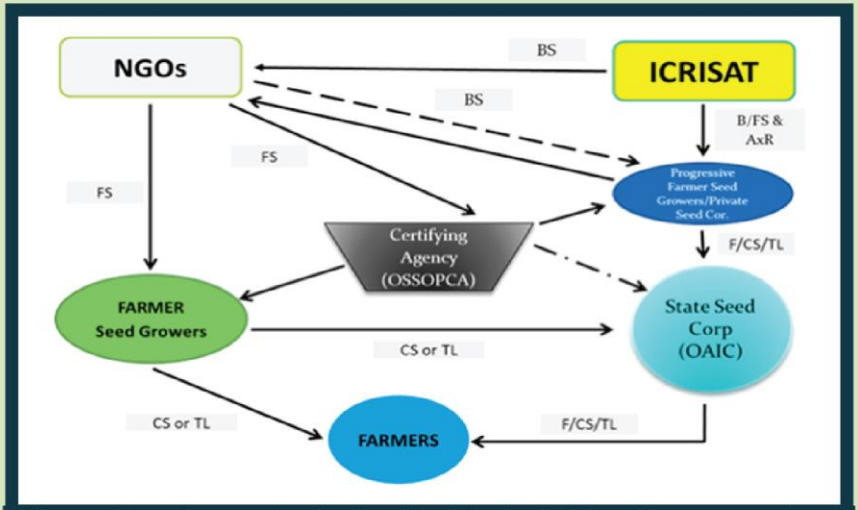



*Figure 6. Seed system institutionalized in the Odisha pigeonpea project.*

**Institutionalization of seed system in Odisha pigeonpea project**

- **Improved Pigeonpea Production Technology (IPPT).** Smallholder farmers do not apply any inputs (fertilizers and pesticides) nor do weeding after sowing if pigeonpea is cultivated as sole crop. Around 80-85% of smallholder farmers plant local cultivars as an intercrop either with cotton, groundnut, maize, upland rice and finger millet, and grown along rice bunds and around fishponds. The introduction of improved technologies (high yielding cultivars, fertilizer, line sowing in ridges, spacing, weeding, and integrated disease and pest management) is crucial in the management of pigeonpea farming system. Yield performance of farmer-preferred varieties surpasses the productivity of local cultivars by 41% due to their resistance from diseases (sterility mosaic and Fusarium wilt) and drought, and are excellent for intercropping.

- **Farmer participatory varietal selection trial (FPVST).** A total 162 sites was established during 2011 to 2013 cropping season and results showed that newly introduced varieties such as ICP 7035 (1,338 kg/ha) were having highest yield than the local cultivars (615 kg/ha).

- **Capacity building.** In a span of 3 years (2011 to 2013), a total 27,829 participants (farmers, DA Officers and Technicians, NGOs, and ICRISAT staff) including 4,054 women farmers attended various meetings, seminar-workshops, and trainings on crop seed production of hybrid and varieties, IPM/IDM, dal mill operation and farmers' field days.

- **Post harvest facility.** Through ICRISAT's Inclusive Market-Oriented Development (IMOD) approach, farmers including self-help groups (SHG) and NGOs benefitted from the dal mill machine and equipment provided by the project. The operationalization of dal mills and go downs in the project sites brought about cheap source of processed pigeonpea dal at the door steps of smallholder farmers not only in village sites but also in adjacent villages.

- **Awareness activities.** These include:

- **Pigeonpea seed production manual in vernacular form.** A total of 4,500 copies of pigeonpea seed production manuals in vernacular forms (Marathi and Telugu) were distributed to farmers.

- **Enhancing local-level awareness of released varieties.** 5,000 pamphlet on farmer preferred varieties were published in Telugu and Marathi and distributed to farmers during farmers' trainings and field days.

## e. Conclusion: Lessons Learned

The results of the project's success in achieving its initial goals that were mainly, to evaluate and identify newly developed high yielding disease resistant pigeonpea varieties and hybrids in marginal soils; to develop village-level seed delivery systems to achieve self-sufficiency in seeds; capacity building of farmers, self-help groups, NGOs and Agri-technicians in sustainable production technology components; to enhance profitability by linking production with dal processing and marketing; and to provide research backstopping for refinement and improved pigeonpea production technology (IPPT) components.

The project covered a wide socio-demographic mixture of people from all age groups, with varying marital status and educational qualifications. Increased participation by women (34%) was noticed as part of the project activities. The women participants learned line-sowing as well as improved seed storage practices and at the same time participated in various cultural management practices. Farmers were introduced to a number of technologies such as the introduction of new high yielding varieties as against their landraces; reducing the seed rate for farmers' practice from 20-25 kg/ha to 12 kg/ha; application of fertilizer [di-ammonium phosphate (DAP) at 100 kg/ha]; application of insecticide, weeding, and line sowing in ridges, which were not being practiced before the project started. With these technologies, a noticeable increase of at least 70% was seen in the productivity as against landraces and there was an increase of a minimum of 170-190% in net income. This was attributed to the adoption of the 'one village-one variety' seed delivery system model, which provided high quality and productivity of introduced farmers preferred varieties and hybrids pigeonpea.

Overall, the results obtained are very positive and suggestions were considered and have been implemented accordingly. The positive achievements of the project bring to light the need for continuous and additional support for the project not only because of the current investment gain but also due to the projected increase in production by year 2020 especially in Rayagada and Boudh.

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# UNIT 2

## Principles and Objectives of Extension Education

### Concept of Extension Education

A lifelong process of learning; a continuing process of bringing about desirable changes; and the desirable changes in the behavior of the people include: **increased knowledge**, **new skills**, or **better attitudes**.

### Models of Education which Support Concept of Lifelong Learning

1. **Informal education** – is the lifelong process by which every person acquires and accumulates knowledge, skills,attitudes and insights from daily experiences and exposure to the environment.

2. **Formal education** – refers to the highly institutionalized, chronologically graded and hierarchically structured 'education system' starting from primary school until reaching university education.

3. **Non-formal education** – refers to any organized, systematic, educational activity carried on outside the framework of the formal system to provide selected types of learning to particular sub-groups in the population, adults as well as children.


*Hands-on training on Fish Polyculture in Cage in Marihatag, Surigao del Sur*

*Table 1. Differences between formal and non-formal type of education*

| Bases of Comparison | Formal Education | Non-Formal Education |
|---|---|---|
| Educational Objectives | For future application or preparation in life | Immediate application |
| Group Served (Clientele or Audience) | Mostly youth | Youth and Adults |
| Curriculum | Fixed curriculum or course of study | Based on peoples' need; no fixed curriculum or course of study |
| Place/Venue | Classroom and schools | Where the people are; anywhere in the community |
| Sponsorship | National government and other sources | National government and other sources |
| Certification | Confers degree and diploma | Gives certificate |

## Other Concepts of Extension Education

1. A generic term for all types of rural development work.
2. As a means to extend, spread or disseminate useful information and ideas to rural people outside the regularly organized schools and classrooms.
3. A system by educational institutions that extends education to persons unable to avail of a formal education.
4. An organized service designed to improve the living conditions of farmers, homemakers, and other people by teaching them to adopt better or improved methods and practices in their livelihood system.

## Four Broad Areas where People Change

1. **Change in what people know.** Change can happen in peoples' knowledge of themselves, their society, and physical environment.

2. **Change in what people can do.** Change may happen with peoples' skills, mental and physical.

3. **Change in what people think and feel.** Change can happen with peoples' attitude toward themselves, society and physical environment.

4. **Change in what people actually do.** Change in peoples' actions especially related to factors determining their own welfare.

## Guiding Principles of Extension Education

1. Is an educational process
2. Serves farm families (households)
3. Begins where the people are
4. Are based on peoples' participation
5. The community is the natural classroom
6. Works with and through people
7. Uses a variety of teaching methods
8. Works with individuals and groups like families or households
9. Proper timing is essential to extension visits
10. People learn to do things by doing
11. Method of teaching is simple, clear, and concise
12. Innovation introduced/disseminated is technically sound, economically profitable, and socially acceptable
13. Starts with basic needs and then with other potentials of communities
14. Requires dynamic linkages and partnerships
15. Spirit of self-help is essential to democratic living
16. Deals with the institutionalization of cooperatives/self-help

## Nature and Characteristics of Extension Education

1. Learning or education is for all
2. Deals with the change of attitude, knowledge and skills of people
3. Works with men, women, youth, and the elderly to answer their needs
4. 'Helping people help themselves'
5. 'Learning by doing' and 'seeing is believing'
6. Teaching people what their needs are, as well as how to work out ways of satisfying these and inspiring them to achieve their desires
7. Development of individuals in their daily life; development of leaders, the society and the world as a whole
8. Working together to expand the welfare and happiness of the people including their families/households, own villages, country and even the entire world
9. Working in harmony with the culture of the people
10. Living relationship between village workers and the village people
11. Two-way channel – brings scientific information to the village people and it also takes the problems of the village people to the scientific institutes for possible solutions
12. Continuous educational process where both learners and teacher(s) contribute and participate

## **Traditional Perspective on the Role of Extension** (Figure 7)

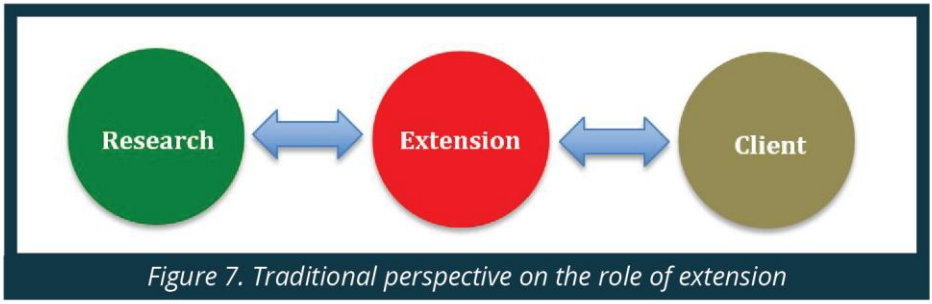



*Figure 7. Traditional perspective on the role of extension*

- Linear process
- Extension bridges the gap between the research and the client system

## **Improved Extension Perspective (**Figure 8)

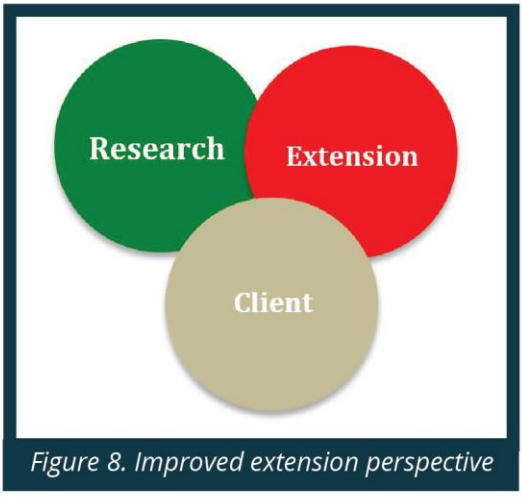



*Figure 8. Improved extension perspective*

- Presence of an interface, which illustrates the importance of synergy
- R, E, and Client are in sync with each other

## **Philosophical Qualities of Education**

1. That education is the permanent way to bring about change, hence, extension is a fundamental education process.
2. That effective extension education must be based upon freedom of choice, voluntary participation and that extension functions best when democratic processes are applied.


*Hands-on Training on Payao & Bottom Set Gillnet Construction and Management in Davao de Oro*

3. That extension is a form of education that teaches people to do things, not in the system of doing things for the people.
4. That idea must be put to work for the betterment of the human race. Pursuing knowledge of its own sake is like keeping tools locked up in a tool chest. A tool must be used like knowledge must be put to work.
5. That knowledge can only be transferred through a process of 'man helping his fellowman.' This implies the fundamental belief in the ability of people to help themselves and that all levels of society can learn to make decisions.
6. That there is no fundamental difference in the intellectual abilities of any race or sex, if given the chance to acquire education and if helped and provided the opportunity in the application of knowledge. All people can and when given the right stimulus and incentives, can improve their capacity and to put to work the knowledge and skills to practical use.

# UNIT 3

## History of Extension Service

*Table 2. Timeline of extension service (history)*

### 1. Early Beginnings of Extension

| Dates | Important Events |
|---|---|
| Early 1800 BC | In Mesopotamia (present day Iraq), archeologists have unearthed clay tables that have inscriptions of advice relating to watering of crops and getting rid of rats. There were also hieroglyphics on Egyptian columns that mention of advice to avoid crop damage and loss of lives during inundation of the river Nile. |
| 2nd century BC to 3rd century BC | Latin texts contained practical farming experiences aimed to help Roman landowners in the maintenance and improvement of their estates s well as revenues. |
| Imperial China | The dissemination of agricultural information was of prime importance to the state since taxes and revenues were obtained from landowners and tenants. |
| 1840s | The first 'University Extension' or the 'Extension of the University' was recorded in Britain. |
| 1850s | Discussion on how universities could serve the needs of the rapidly growing population of the growing industrial and urban areas began in two ancient universities namely Oxford and Cambridge. |

### 2. 19th Century England

| Dates | Important Events |
|---|---|
| 1867-1868 | The first practical steps were taken by **James Stuart**, a fellow of the Trinity College in Cambridge where he gave lectures to women's associations and men's clubs in the north of England. He is then regarded as the '**Father of University Extension**'. |

| | |
|---|---|
| 1871 | James Stuart appealed to authorities of the University of Cambridge to organize centers for extension lectures under the University's supervision. |
| 1872 | The University of Cambridge adopted the system. |
| 1876 | The University of London followed the initiative of the University of Cambridge. |
| 1880 | The system became well established and developed, which was referred to as **extension movement**. The University extended its use/services beyond the campus thus **extension was institutionalized** as a function of universities. |

### 3. Birth of Modern Agricultural Extension Service in Europe

| Dates | Important Events |
|---|---|
| 1841 | Founding of the Royal Agricultural Improvement Society (RAIS) in Great Britain. |
| 1845 | The first agricultural extension service came into existence as a result of the outbreak of the potato blight in Ireland where the predominantly peasant community relied on potatoes as staple food. |
| 1847 | The Earl of Claredon urged the RAIS to appoint itinerant lecturers to travel around the distressed districts to help farmers improve their cultivation and grow nutritious crops. |
| 1890s | The universities began to cover agricultural subjects in lectures. |

### 4. Birth of Modern Agricultural Extension Service in America

| Dates | Important Events |
|---|---|
| 1850s | Two significant developments on the evolution of agricultural extension in United states were made namely:<br>- Morill Act of 1862 signed by Pres. Abraham Lincoln during the civil |

| | |
|---|---|
| | war, which provided for the creation of **Land Grant Colleges and Universities**. Funds were made available from the Federal government to establish demonstration centers and experimental stations.<br>- The beginnings of the **Farmers Institute Movement** which organized 1-2 day meetings for the farmers and invited professors from the state colleges and universities as speakers. |
| 1890 | The American Society for Extension of University Teaching was established. The second Morill Act was passed which extended Land-Grant concept in other areas of USA. The Farmers Institute Movement has been institutionalized with federal support and supervision. |
| 1891 | The University of Chicago and University of Wisconsin began organizing extension program, which lead to the establishment of Land Grant College and the formal establishment of agricultural extension work in the country. |
| 1914 | The passage of the Smith-Lever Act which established the Cooperative Extension Service – a tripartite cooperation between the federal, state, and local government together with the state and universities extension agency. |

## 5. Agricultural Extension in Developing Countries

| | |
|---|---|
| 1940s – 1960s | Agricultural extension organizations were established in Latin America and the Caribbean. |
| 1960s – 1970s | Most extension organizations started in many African nations. |

## 6. Agricultural Extension in the Philippines

| 6.1 Spanish Regime | |
|---|---|
| **Dates** | **Important Events** |
| 1565 | Establishment of model farms or called 'Granjas Modelos' by the Spaniards, which served as experimental station and demonstration centers especially for rice, sugarcane and tobacco. |

| 6.2 American Regime 20th Century | |
|---|---|
| **Dates** | **Important Events** |
| 08 October 1901 | Start of extension work but no definite plan was followed. |
| 30 April 1902 | The Bureau of Agriculture under the Department of Interior was organized to boost extension work. |
| July 1910 | The Demonstration and Extension Division was created in the Bureau of Agriculture. This marked the first organized department that implemented extension & research programs. |
| | Start of implementing organized experiment stations and demonstrations in strategic places in the country. |
| 10 July 1919 | Extension service organization of the Philippines was made a separate Bureau of Agriculture. The Demonstration and Extension Division expanded its activity to include farmer's cooperatives, organizations, rural credit, marketing and animal science. Extension workers were called **farm advisers.** |
| 1923 | The name Demonstration and Extension Division was changed to Agricultural Extension Service. **Ms Maria Y Orosa** founded the home extension service as a unit under the Organic Chemistry Division of the Bureau of Science. |
| 1925 | Food Preservation Section of the Organic Chemistry Division was organized --- **Home Management.** This expanded to form the Food Preservation Division of the Bureau of Science in 1926. |
| 1932 | The Demonstration and Extension Division was renamed Agricultural Division. |
| 1933 | The Fiber Standardization Board was abolished and the Fiber Inspection Service was returned to the Department of Commerce, transferring the educational fiber inspector to Bureau of Plant Industry. |
| | The Food Preservation Division of the Bureau of Science was made a special division of the Department of Agriculture and Commerce and was called the Division of Economics. |
| 1936 | The Division of Economics was transferred to the Bureau of Plant Industry and merged with the Utilization Division of the Bureau. |

| 6.3 **Commonwealth Period** | |
|---|---|
| **Dates** | **Important Events** |
| 1936 | Passage of Commonwealth Act No. 85 led to the creation of the position of agriculturist, which allowed for a wider field of coverage & participation of local government in the financing of the extension programs. They were then called **extension agents**. |
| 1937 | Commonwealth Act 85 authorized each province to employ few home demonstrators to show home extension work. Home demonstrators were high school graduates and given 6 months training in Manila by the Plant Utilization Division. |
| 1938 | The Bureau of Animal Industry also organized its own extension activities by establishing Livestock Extension Division, charged with responsibility of demonstrating and disseminating information materials on livestock and poultry production. |
| 1941 | BPI's initial task was mainly on fruit trees, vegetables, and ornamental plants. However, in this year, greater attention was on rice, corn, tobacco and other major crops.<br>World War II suspended all extension work in the country. |

| 6.4 **Post-War Period: Lasted for almost three years (1942-1945)** | |
|---|---|
| **Dates** | **Important Events** |
| | Home economics and agricultural extension suffered drawbacks. |
| 1947 | The home extension unit of the Plant Utilization Division of the Bureau of Plant Industry was fused with the Agricultural Extension of the Bureau. Thus purely research functions were left with the Plant Utilization Division. |

| | |
|---|---|
| | It was also about this time that 4-H club work started with the Agricultural Extension Division. |
| 1949 | US government sent an economic survey mission to the Philippines to improve and facilitate recovery of post-war situation,<br>Chief of the mission, Daniel W Bell recommended that agricultural extension services be consolidated under one administration for efficiency. |
| 1952 | Republic Act No 680 was signed creating the Bureau of Agricultural Extension (BAEx). It was tasked with the consolidation, coordination and integration of all agricultural extension activities of all agencies. |
| 1954 | Executive Order No. 57 created the Community Development Council (CDC) tasked to coordinate and integrate on a national scale the efforts of governmental and civic agencies for improving living conditions. |
| 1956 | Executive Order no 156 created the office of the Presidential Assistant on Community Development (PACD) tasked to coordinate all community development activities of government. This was done to eliminate overlapping and duplication of activities.<br>The self-help philosophy was emphasized together with the idea of partnership between the people and government. |
| 1958 | The Rice and Corn Production Coordinating Council (RCPCC) were organized as the highest governing body to exercise direct control and management over the Rice and Corn Production Program. It aimed at effecting increase in the national supply of rice thru increase domestic production. |
| 1959 | RCPCC was organized in 1959 as the highest policy making and coordinating body. |
| 1963 | BAEx was changed to Agricultural Productivity Commission (APC) by virtue of Republic Act 3844. APC was under the office of the President. It formed part of the land reform program (Land Authority, Agricultural Credit Administration, and Land Bank) under the Presidents' Office. |

| | |
|---|---|
| 1964 | Executive Order No.62 emphasized rice and corn, which led to the creation of Rice and Corn Authority (RCA), which replaced RCPCC.<br>An added feature of RCA was the extension of credit for seeds, pesticides, harvesting, as well as a fertilizer subsidy program for participating farmers. |
| 1966 | Executive Order No 38 changed the Presidential Assistant for Community Development to Presidential Arm for Community Development and at the same time elevating the PACD to cabinet rank. |
| | Executive Order No 64 was revoked while Executive Order No 50 was issued to restore the power and responsibility for the implementation of the Rice and Corn Production Program to the RCPCC. |
| 1969 | By virtue of Executive Order No 183, the National Food and Agriculture Council was created in place of RCPCC. NFAC performed the functions of RCPCC with added task of administration and implementation of the national program of self-sufficiency in foodstuffs. It controlled much of the agricultural funds from the government and USAID. It assumed a major responsibility for the delivery of agricultural extension. |
| 1972 | Declaration of Martial Law resulted in some changes like in reorganization of national offices. Pres. Letter of Instruction dated Nov 1 reverted APC to its original name Bureau of Agricultural Extension. The functions and personnel in cooperatives were transferred to the Department of Local Government and Community Development.<br>Presidential Decree 970 abolished the Bureau of Farm Management and the Department of Agrarian Reform and its extension function to the Bureau of Agricultural Extension. |
| 1977 | World Bank Mission appraised the Philippine agricultural system.<br>Adoption of the Training and Visit System, which became a complementation program.<br>The agricultural extension service was strengthened with facilities and other resources such as hardware and software. |

| | |
|---|---|
| | **The Bureau of Agricultural Extension Becomes a staff Bureau** |
| 1978 | Ministry wide regional offices were created in the Ministry of Agriculture The Bureau of Cooperative Development, which was under the Ministry of Local Government was placed under the Ministry of Agriculture. |
| 1979 | National Extension Project (NEP) became operational with loan from WB @ $35M. |
| 1980 | The structural set-up of the Ministry of Agriculture was streamlined for a more unified extension service. Presidential Decree No 1579 and Letter of Instruction No. 595 made for the 12 Ministry-wide regional directors and 24 Asst. Regional Directors (one for livestock and one for crops in each region). This was followed by the designation of 75 Provincial Agricultural Officers in 1980.<br>Bureau of Cooperatives Development and the Bureau of Fisheries and Aquatic Resources, which used to be line agencies became staff bureaus. |
| 1982 | Executive Order 803 established an integrated management system for agricultural services for timely delivery of extension services and adequacy. |
| | **The Creation of Agricultural Training Institute (ATI)** |
| 1987 | Executive Order No 116 (1987) merged the Bureau of Agricultural Extension, Philippine Agricultural Training Council and the Philippine Training Center for Rural Development into the Agricultural Training Institute. |
| 1987 | ATI is mandated by Executive Order 116 to be responsible for the training of all agricultural extension workers; ensure that training programs address the real needs of the agricultural sector; ensure that research results are then communicated to the farmers through appropriate training and extension activities. |
| 1991 | Congress enacted into law the LGU code (RA No. 7160), the code decentralized authority to local government units the management and supervision of agricultural extension system of the country. |

| | The Agriculture and Fisheries Modernization Act (AFMA) of 1997 |
|---|---|
| 1997 | RA 8435 created the AFMA law of 1997, which pushed for the modernization of agriculture and fisheries sectors to address Food security, poverty alleviation and social equity, income enhancement and profitability especially for farmers and fisher folks, global competitiveness, sustainability. |
| Section 87 | Extension Services states that Agriculture and Fisheries extension services shall cover the following major services: a. Training services, b. Farm or business advisory services, c. Demonstration services; and d. Information and communication support services thru tri-media. |
| Section 88 | Special Concerns in the Delivery of Extension Services; that it should be multidisciplinary. |

## Terminology and Meaning of Extension in Selected Countries

*Table 3. Terminology of extension in different countries*
*(Source: Dr BR Sumayao, DAERS, UPLB-CA)*

| Countries | Extension is translated as: |
|---|---|
| Netherlands | The term is **voorlichting**, which means lighting the pathway ahead to help people find their way. |
| Germany | The term is **berating**, which means an expert providing the best advice to reach one's goal, but leaves the person the final responsibility for selecting the way. The term is **aufklarung**, which means enlightenment so that one knows clearly where he/she is going. The term **erziehung**, which means education that is to teach people to solve their problems **themselves**. |
| Austria | The term is **forderung**, which means furthering or stimulating one to go in a desirable direction. |
| France | The term is **vulgarization**, which means simplification of the message for the common man. |
| Spain | The term is **capacitacion** which means improving the abilities of people usually through training. |
| United States | **Extension** means education. |
| Korea | It means rural guidance. |
| Indonesia | The term is **penyaluhan**, which means lighting the way ahead with a torch. |
| Malaysia | The term is **perkembangan**, which means education similarly the way United States, interprets. |

# UNIT 4

## Communication in Extension

Communication is an essential element of an individual's personal and social development. It is through communication that one learns, grows, and discovers.

Communication is a **process** :

- Whereby people influence the behavior of other people through messages or information conveyed through various channels. This brings to light the importance of communication as a means to foster relationships between and among individuals and societies.

- In which two or more persons create and share information with one another in order to reach a mutual understanding, mutual agreement, and subsequent collective action (Kincaid, 1979; Rogers, 1980).

- Whereby meanings or ideas are transferred from one person to another (Jacobsen, 1987).

Communication has **five basic elements** namely: **source**, **message** (idea), **channel**, **effect** (purpose), and **receiver**.

Communication is concerned with eliciting specific behavioral changes namely:

- **Knowledge** (what a person knows)
- **Attitude** (what a person feels)
- **Practice** (what a person does)

Communication involves a conscious attempt by one individual to change the attitude, belief or overt behavior of another individual or group through the transmission of some messages.

### Etymology of the Term 'Communication'

Latin word 'communis', which means to make common or establish commonness between two or more people; 'Communico' which means to share.

*Cassava Livelihood Training in Flora and Pudtol, Apayao*

When a person enters into a communication situation, it is assumed that both parties have something in common such as a common language and symbols whose meanings are mutually shared.

## Importance of Field Experience in Communication

The **field experience** of an individual influences his/her ability to communicate. Communication takes place between people when there is shared field of experience.

This determines the extent of communication. The wider the common field of experience between two people (or the greater similarity of experiences they share), the likelihood of an effective communication happens. In turn, the narrower the field experience shared, the communication becomes limited and most likely to be ineffective.

## Five Basic Elements of Communication (Figure 9)

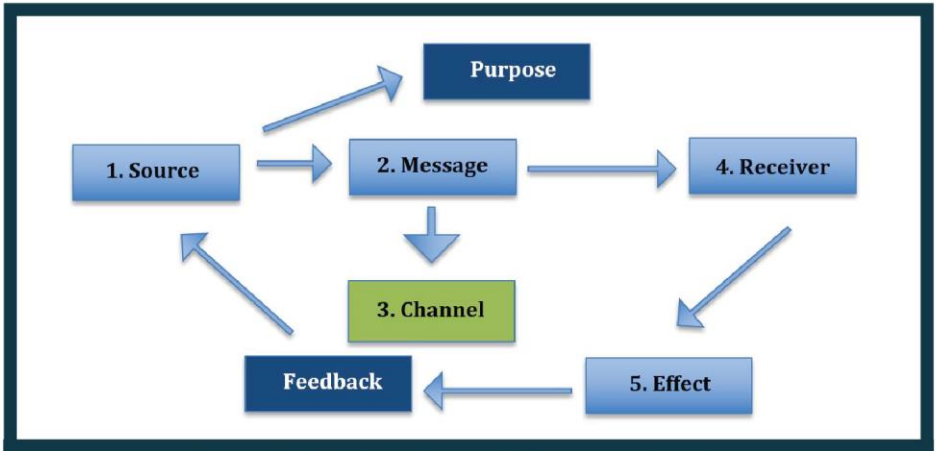
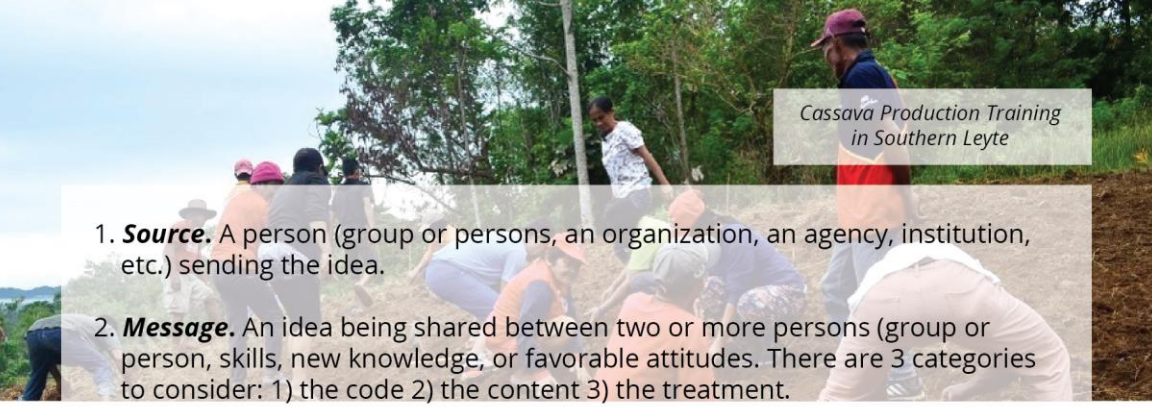



*Figure 9. Five basic elements of communication*



*Cassava Production Training in Southern Leyte*

1. ***Source.*** A person (group or persons, an organization, an agency, institution, etc.) sending the idea.

2. ***Message.*** An idea being shared between two or more persons (group or person, skills, new knowledge, or favorable attitudes. There are 3 categories to consider: 1) the code 2) the content 3) the treatment.

3. ***Channel.*** The method by which the idea is conveyed. It may be verbally expressed either orally or in print.

4. ***Receiver.*** Another person (or another group of persons, an organization, an agency, institution, etc.) receiving the idea. They are the targets of the communication.

5. ***Effect.*** The desired goal of communication planned by the source one of a positive change in behavior on the part of the receiver, i.e. change in knowledge, skills, or attitudes for better rural living. It is the consequences of the communication transaction. Implied in this desired effect are the purpose of the communication and the concept of feedback.

## Concept of Noise and Feedback in Communication

**Noise** is any stimulus that gets in the way of sharing meaning. The success of a communicator depends on the way 'noise' is cope with.

- *External noises* include sights, sounds, and other stimuli that draw peoples' attention away from the intended meaning.
- *Internal noises* are the thoughts and feelings that interfere with meaning.
- *Semantic noises* refer to those alternate meanings aroused by certain symbols that distort meanings.

**Feedback** refers to the mental or physical response to messages. Sometimes, this is referred to as effect or impact. This can be intentional or unintentional depending on the response of the receiver of the message from the source. Feedback functions as a corrective measure to prevent communication breakdown. This is an important element of development communication (Case 2).

## Characteristics of Feedback

1. ***Observable or Overt.*** The receiver's response to the message may be observable (overt) or unobservable (covert). An example of a covert feedback

is a positive change in attitude towards the source, the message or the strategy. An overt manifestation of the covert response can be a smile, a clap, or a simple nod given to the source.

2. ***Verbal or Non-Verbal.*** The source can receive a verbal or a non-verbal feed back (e.g. Facial expressions or gestures).

3. ***Internal or External.*** The source hears himself/herself and gives the response (e.g. When you mispronounce a word and then correct it with the correct pronunciation). External, on the other hand, is a response to the receiver's message (e.g. When the receiver raises a hand to ask a question).

4. ***Intentional or Unintentional.*** Messages that are unconsciously sent but nevertheless are perceived by the source. Unintentional are not consciously intended by the receiver, but are more often more accurate in revealing the feelings of the responder than the verbal feedback (e.g. Yawning, evasive eye movement, etc.).

5. ***Directive or Non-Directive.*** The former communicates an evaluation by the responder about the source of the message or the strategy. Directive feedback may be positive or negative, rewarding, or disturbing. The latter is non-evaluative. It aims to describe, report what is observed or felt, ask questions and avoids judgment.

6. ***Formal and Informal.*** Formal is solicited by the message sender usually in writing or through other mediated means (e.g. On-line or Telephone) using structured evaluation instruments such as questionnaires, attitude/opinion scales, and interview schedules. Informal, on the other hand, may be solicited from or spontaneously provided in a face-to-face setting (e.g. A facilitator pauses to ask if there questions or a member of the audience asks for clarification).

## Attributes of Communication as a Process

1. ***Dynamic.*** Communication is not static which means that it has an ever-changing character with no clear beginnings and endings.

2. ***Systemic.*** It is a system that consists of a group of elements interacting with one another to achieve its purpose.

3. ***Interaction through symbols.*** Refers to the language or symbol selected and the way in which this is organized for interpretation of the message.

4. ***Meaning.*** The meaning of the message is personally constructed. No two people construct the same meaning even if they hear or see the same thing. Interpretation is determined by an individual's experiences, thoughts,

feelings expectations, knowledge, etc. Every person is unique so thus is the interpretation.

## Functions/Purposes of Communication

1. Social Functions

- **Meet psychological needs.** People are by nature social animals. While they need food, water and other biological necessities, they also need other people to talk or interact with.

- **Fulfill social obligations or to conform to societal norms.** The need to recognize and acknowledge acquaintances during several circumstances like meeting them on the street, at the market place or anywhere.

- **Build and maintain relationships.** When a person is not known at all, he/she tries to communicate to that person to try out the relationship. Having things in common with the other person may hasten the growth of the relationship.

- **Define the nature of the relationship.** Through communication, people in relationships are continuously defining and redefining the power and affection between them by what they say and how they say it.

- **Enhance and maintain sense or self.** Through communication, approval for what the person is and for who is solicited.

- **Manage conflict.** Conflict is a reality of life. Through communication, conflict can be managed by sharing information and by solving problems that reduce dissatisfaction.

2. Decision-Making Functions

- **Share information.** Means to get and to give information since it is a key ingredient in sound and effective decision-making.

- **Influence others.** Since many of the decisions made involve other people's agreement, a second goal of decision-making is that of changing attitudes and behaviors. This also will include giving advice, stressing points, making corrections, and reducing dissatisfaction.

3. Other Functions:

- Changing attitudes and behaviors

- Convincing farmers to try out a new technology

## Purpose of Communication in Extension

| *Purpose* | |
|---|---|
| To inform | Radio, newspaper |
| To bring about understanding | Magazine Features, lecture, meeting, extension |
| To motivate | Bulletin |
| To persuade | Discussion group |
| To learn new skill | Method Demonstration |
| To change or adopt a new practice | Leaflet, Illustrated comics |
| To entertain | Radio/TV Jingle, mini drama |

## Levels of Communication

1. ***Intrapersonal Communication.*** It is communication with oneself. All persons have the capability of engaging in conversation with themselves, hence, the focus is on the individual, on his cognition and attitudes.

2. ***Interpersonal Communication.*** It is the interaction between two or more individuals in a face-to-face situation.

3. ***Organizational Communication.*** It refers to the structure and functioning of units within an organizational system. The extension workers as well as the client-learners have to follow the line of command in an organization.

4. ***Mass Communication.*** It pertains to the interaction of individuals with the public through mass media such as TV, radio, newspaper etc.

    - It is directed towards a relatively large, heterogeneous and anonymous audience.
    - The message is transmitted publicly, often timed to reach most of the audience simultaneously and are transient in character.
    - The communicator tends to be, or to operate within, a complex organization that may involve great expense.

*Table 4. Qualities of a communicator*

| Qualities of a Communicator | |
|---|---|
| **Good Communicator** | **Poor Communicator** |
| Credible | Fails to bring worthwhile and useful message to the receiver. |
| Adequate knowledge of his audience, message and channels to use. | Fails to give complete or relate the problem to the learner. |
| Genuine interest in the welfare of his audience | Does not consider that effort and time are needed to deliberate on and absorb ideas. |
| Does careful preparation of his message | Keeps on talking and the audience does not listen and there are barriers to learning. |
| Clear way of speaking. | Does not enjoy the credibility of the people. |
| Establishes mutual understanding | Fails to understand the values, customs, prejudices and beliefs of his clientele. |
| Awareness | Does not start in the stage the learners are in knowledge, skills, interest and need. |

## Organizational Communication

1. ***Formal Channels of communication*** are those indicated by the management structure and formal report system. It prescribes who reports to whom and in what form these communication will take place.

2. ***Informal Channel of communication*** is the unsanctioned personal network of information among employees fostered social relationship and friendship.

## Categories of Formal Communication Organization

1. ***Downward Communication*** refers to the communication of information to the subordinates by the head of the office.

2. ***Upward Communication*** refers to the communication of information by the subordinates to the superiors. This is usually done through reports in written form or verbally.

3. ***Horizontal Communication*** is the process of exchanging information between peers at any organizational level, to coordinates activities. It is apparent in horizontal communication that information/message are shared and activities are coordinated.

## *Case 2. Concept of Development Communication*

Development communication is a means employed by the government to dialogue with its citizens. The approach was initially pioneered in the agricultural sector as early as in the 1950's with the end and view of providing communities with information that can improve their lives. It formed part of community development that takes into account the information needs of communities in bettering their lives.

Development communication is the art and science of human communication applied to the speedy transformation of a country and the mass of its people from poverty to a dynamic state of economic growth that makes possible greater social equality and the larger fulfillment of the human potential.

### Key elements of the development communication approach

1. **It is responsive.** It does not provide 'useless' information - that which people did not want to know, but which central planners deemed as crucial. People understand their own needs better and through this approach communication becomes a tool in the planning and development process, not a mechanism to persuade communities once unpalatable decisions have been made ('in their best interests!').

2. **It hinges on feedback.** It is not a one-way process but involves dialogue mechanisms about the information, which was transferred. It is also fundamentally about consultative processes being managed at community level.

3. **Innovation and creativity.** The message must not be dull and boring but show clearly how the information transmitted will make a difference in the life of the recipient - it must not instill doubt or disbelief, but trust and confidence (look for local adopters). Development Communication workers should, however, balance creativity with an understanding of what communities would be prepared to accept and where consideration has been given to the norms and prevailing values of that community.

4. **Independent validation.** It is not about 'government speaks'. This approach builds participatory mechanisms and functional networks involving NGOs, CBOs, Traditional Leadership structures while also encouraging links with networks from across the country and indeed all over the world. These can either prove or disprove the validity of the information transmitted.

5. It is about sustainability and continuity. It is not about dumping information in a community and never going back for months.

6. It is about establishing common ground with communities who are to be the recipients of the information/message. It is not about the public servant who swoops in and out of a community in his or her GG like some 'phantom expert' to 'educate and uplift' communities. The standards, norms, values, habits of the community are paramount. (This may mean that those accustomed to a liaison style hinging on comfortable hotels with prepared meals and warm fluffy duvets will need to make some adjustments to their style!).

7. It is about community participation. Development programs which plan for communities or supply information which planners feel communities need, fail to be relevant initiatives and more often than not fail to be sustainable. A primary emphasis of this approach is to plan with communities, create structures which offer communities and developers equal power, and use communication methods which are fundamentally participatory in nature. This often requires that government planners, developers or community workers have to listen to the advice of communities and change the views they themselves hold.

8. It is about access and visibility of government where government is no longer a distant and unknown entity in community development experiences. This approach reverses the practice of communities having to travel long distances and at relatively great cost to access government Services and information. This is made worse when government is not clearly and properly identifiable and access is difficult because of inaccessible buildings, unfriendly and unprofessional staff, etc. The development communication approach brings government employees face to face with communities so promoting accountability at local level. This is not possible when civil servants are remote and impersonal.

9. It is about the use of simple and relevant language where concepts are packaged in the experiences of communities, in their own language and where communities themselves have played major role in the development of material for development communication programs.

*Source: file:///Users/myermula/Desktop/Development%20Communication.webarchive*

# UNIT 5

## Technology Development

*'Extension is not technology transfer although it has a role to play in the process. Extension may not even be necessary in the transfer of technology when farmers themselves seek out the research centers directly for up-to-date technology that they (the farmers) can use.'*

*Obdulia F. Sison, 1994*

### Technology Defined

1. Agricultural technologies are the most significant weapon against poverty (Joe De Vries, AGRA).

   "The way to help other countries avoid our mistakes isn't to deny them tools but to help them deploy those tools more effectively than we have."

   Widening options to help farmers lift themselves out of poverty.

2. Defined as the body of tools, machines, materials, techniques and processes used to produce goods and services and satisfy human needs. Science has contributed much to the generation of technology.

3. This could be a means or methods employed in the production/manufacture of an output; installation, operation, and maintenance of equipment, device, or industrial set-up; know-how, invention, discovery including the performance of technical skills and services (Perez and Burgos, 1992).

### Categories of Technology

1. Component Technology refers to specific cultural techniques in the management/ production of crops, livestock, fishery and forestry.

2. Package of Technology (POT) refers to the combination of all necessary component technologies for production or postproduction activities. These technologies have been proven to be individually outstanding and when put together will result to improve performance and greater productivity in the farm, factory, household, firm, community, or an organization.

*A two-day technical training on Natural Farming Systems in Barangay Diwan, Dipolog City, Zamboanga del Norte*

## Types of Technology

1. ***Product.*** Some technologies take the form of physical goods (e.g. Hybrid or High Yielding Variety seeds).

2. ***Process.*** Technologies of this nature are not tangible and may refer to a 'system' for doing things or system/schemes for improved production, postproduction or processing (e.g. Tissue culture).

3. ***Service.*** Includes types of technologies that generally provide the complementary activities/services to enhance existing program/policies of the government (e.g. Harvesting machinery that does several functions).

4. ***Information.*** Can be technologies that are simply information or significant findings that may indicate valuable socio-economic and technical database for policy formulation and follow-up research and development activities.

## *Case 3. Technologies in Agriculture*

Technologies for agriculture are continuously developed through research and development works. Technologies have played significant roles in the development of this sector. Some of these (Ramey, 2012) include the following:

- **Use of machines on farms.** Now a farmer can cultivate whatever area he wants with less labor, and can cut costs even more when he opts to use farm machineries like a tractor and other harvesting technology. The use of planters and harvesters makes the process easy. In agriculture, where time and productions are so important; planting, harvesting and delivering on time are critical. Hence, modern agricultural technology allows a small number of people to grow more quantities of food and fiber in a shortest period of time.

- **Modern transportation.** This helps in making products available in the market on time. Through modern transportation and fast movement of produce, consumers in Dubai can consume fresh carrots from Africa in the same day that carrots departed the gardens of Africa. Through modern transportation technologies, farmers can access inputs like fertilizers or move their products from farms to various markets easily for consumers to enjoy.

- **Cooling facilities.** Farmers require these facilities for their highly perishable commodities like tomatoes and even those engaged in ornamental farming. These will keep the freshness of their produce during transport to the market. It is advantageous to both the farmers and consumers where the former can command higher price and the latter, having to eat fresh produce.

- **Genetically produced plants.** Genetically modified crops like potatoes and canola can resist pests and diseases, which is rewarding to farmers for good yield, better income and lesser time for doing the various farm operations. This results to higher return of investment (ROI) to farmers.

- **Irrigation of plants.** Technologies like drip irrigation can make farming possible in areas like deserts. In Egypt, farmers also made use of water pumps to collect water from the river Nile to water their crops. Since most grow rice, which requires much water, they are able to do so by adopting advanced technologies. They also learned to mix nutrients in water to improve the growth of the crops.

- **Development of animal feeds.** Many of the animal raisers are in dire need of forage for animals; hence, the development of feeds is raved by farmers. Most of the manufactured animal feeds have fair-priced and with extra nutrition, which can improve animal health and correspondingly output like milk, meat, and fur.

*Aqua Training Field Visit in Pudtol, Apayao*

## Sources of Agricultural Technology

1. Government R and D center like PhilRice, BPRE, PCC
2. State Universities and College like CLSU, UP, USM, PAC, LSU, etc.
3. International research center like IRRI, ICRISAT
4. Private chemical companies
5. Private manufacturers of machines, tools, equipment
6. Non-government organizations like PRRM, Gratia Plena
7. Agribusiness group, successful entrepreneurs, farmer-cooperators
8. Government personnel of agencies such as DA, DENR, DAR, NIA, DOH, etc.
9. Traders, processors, chemical dealers, seed producers, etc.
10. Mass media

## Technology Development Process

1. **Technology Generation (TG)**. This is the scientific and experimental stage where in a R and D center utilizes all its resources human/technical, financial, material, physical and other resources to generate a component technology or a package technology.

2. **Technology Verification (TV)**. A technology is classified for verification if it can be incorporated in a package of technology that has potential for improving existing farmers' practices. Specifically, it satisfies the following:

    a. It is an integrated technology conducted in farmer's field.
    b. It has been tested at least for two seasons in TG trials.
    c. It has shown economic and technical feasibility in TG trials. Its computed return based on TG trial is better than that of the farmers'

practices as shown by marginal rate of return (MRR).
d. It is perceived to be socially acceptable and environmentally safe.

3. **Technology Adaptation (TA)**. A technology is classified as technology for adaptation if it meets the following criteria:

    a. It is conducted in station or farmers field and only a component of technology;
    b. It has been tested for technology generation (TG) research for at least one season;
    c. It has shown good potential for economic feasibility based on TG research; and
    d. It has good potential for acceptance by farmers and commercial producers.

4. **Technology Dissemination (TD)**. This is the stage when promoters of technologies can use varied approaches and methods in bringing technologies to end-users with the following elements:

    a. General adaptability. Technology is replicable under field conditions.
    b. Economic profitability. The percent of profitability is equal to the prevailing rate of interest on loans of formal financial institutions. Profitability also considers social costs and benefits.
    c. Social acceptability. The technology does not contradict social norms and values prevailing in the community.
    d. Potential availability of support services. Users of the technology have access to market, credit facilities, material inputs and others.

5. **Information for Dissemination (ID)**. R&D centers do not only generate technologies but also information, which are useful. Information that is an output of research can be important in agricultural and rural development. Information for dissemination can be of help in the following:

    a. Possess significant social and economic implications associated with technology adoption;
    b. Contribute to better understanding of research problems;
    c. Offer the information gaps in basic knowledge of agriculture, forestry and natural resources; and
    d. Help policy makers formulate policies in food, agriculture and natural resources.

6. **Technology Commercialization (TC)**. Technologies that have successfully passed the piloting stage, or have passed the criteria for piloting, or have not been piloted but have high potential for commercialization are considered priority technologies for commercialization.

Technologies are selected based on the following criteria:

a. These could provide the best alternative for improving income and productivity of a greater majority of people.
b. These could provide immediate solutions to self-sufficiency problems, environmental sustainability, import substitution, and export generation and promotion of alternative sources of food.

7. **Technologies for Piloting.** Piloting of technologies seeks to:

a. Confirm and demonstrate the feasibility of using improved technologies over relatively large areas involving many small farmers or clientele groups.
b. Gauge end-users' reaction to the information of improved technologies.
c. Identify potential problems related to wider dissemination, utilization, and adoption so that these can be fed back to researchers, planners and implementers.

In the adoption of technology through a pilot project, extension workers give farmer-participants support services like credit, market assistance and technical supervision.

## Innovation – Decision Process

1. ***Knowledge***. The individual is exposed to the innovation's existence and gains some understanding of how it functions.

2. ***Persuasion***. The individual forms a favorable or unfavorable attitude toward the innovation.

3. ***Decision***. The individual engages in activities which lead to a choice to adopt or reject the innovation.

4. ***Confirmation***. The individual seeks reinforcement for the innovative decision he has made, but he may reserve his previous decision if exposed to

*Upland Rice Production Specialized Training in Tayasan, Negros Oriental*

conflicting message about innovation.

## Diffusion – Adoption Process (DAP)

1. **Awareness Stage**. Knowing a new idea, practice or technology is the first stage before one learns adequate information. Basically, the first technology promotion is to inform people, make the aware, and notice the information technology.

2. **Interest Stage**. The person is attracted to the technology. He seeks for more factual information about the technology - - - What it is? How it works? How much it cost? Where the needed input be bought? How much it is yield? What are its advantages over existing practice/breed/product?

3. **Evaluation Stage**. Evaluation and trail stage may be interchanged. In the evaluation stage, an individual shows marked interest in the technology as it applies to him, his family or his work. He will obtain/ ask information regarding the technology by:

    a. Obtain a brochure/leaflet from dealers/retailers
    b. Ask detailed information from the technicians/researchers/extension workers
    c. Get data from the internet
    d. But the product and assess its merit physically
    e. Ask others who have tried the technology

4. **Trial Stage**. The person tries and experiment in small scale the new technology after weighing the advantages and risks involved.

5. **Adoption Stage**. Adoption or continuous use of the technology will take place if the person is convinced of its relative advantage over the existing technology. In this stage, there is satisfaction on the part of the users.

    Adoption can be enhanced if other factors are present like:

    a. Source of seeds/seedling/breeds

b. Market of the product
c. Capital to buy/ financial support
d. Politically supported
e. Infrastructure like farm to market roads, irrigation
f. Technical assistance
g. Other factors like workers, etc.

## Characteristics and Types of Adopters

1. **The innovator** – is the first in his group or community to bring in or adopt a new idea or practice. Innovators are few, especially in societies bound by tradition.

2. **The early adopter** – is quick to see the value of a new practice in his community and will try if he feels it has a fair chance of success. He is usually younger than the average, has higher education, is socially active and reads more than late adopters.

3. **The early majority** – are of average age, experience and average education, highly respected in their communities and adopt a practice only they are convinced of its value.

4. **The late majority** – make up a large block less wealthy, and adopt a practice only when the community generally accepts it.

5. **The late adopters** – is characterized by their conservatism, are older than average and seldom take any risks.

*Technical and Hands-on Training on Tilapia Culture in Cage in Esperanza, Agusan del Sur*

# UNIT 6

## Approaches and Teaching Methods in Extension

### Key Concepts

#### Approach

- An approach embraces the entire spectrum of the process. It states a point of view, a philosophy, or an article of faith. Within an approach, there can be several methods.
- It is an enlightened viewpoint toward teaching/technology promotion. It provides sound philosophy and orientation to the whole process of teaching /technology promotion where the selection of a method is just a part of it.

#### Teaching

- The process of transmitting ideas, information, and technologies from one person to another with the intent of enhancing/modifying the learner's knowledge, attitudes and/or skills.

#### Method

- Refers to the systematic procedure employed by an extension worker in getting the vital information across the client-learners. It includes everything one does or refrains to do which causes behavioral changes in the individual learner.
- It is procedural consisting of a series of actions arranged logically for the smooth operation of a particular teaching task or technology promotion.
- A method is an overall plan for the orderly presentation of a lesson; it is an organized, orderly, systematic, and well-planned procedure aimed at enhancing and facilitating learning.
- As said, it is a procedure or step-by-step way of guiding prospective clients/ adopters in knowing, trying, and adopting specific technology.

#### Technique

- Refers to the art or skill of performance. The extension worker's teaching technique spells success or failure of the method employed. This can involve the use of action or gestures, changing facial expressions to depict different moods, varying voice pitch, tempo and timbre.
- It can be readily implemented, having an immediate applicability to the extension worker or teacher owing to its specificity, feasibility and convenience to the one using it can be implemented.


*Urban Organic Gardening training in Dumaguete, Negros Oriental*

## Extension Approaches and Procedures

### 1. Participatory Approach (PA)

- Adheres to inclusiveness where intended beneficiaries participate in solving their problems.
- Institutionalizes the democratic process where every member of a group of target users is involved in the entire process or program/ project development: situation analysis, planning, implementation, monitoring and documentation and evaluation.
- The type and degree of beneficiaries' participation and involvement may vary by project phase.

**Nature of PA**

The approach provides an opportunity for project beneficiaries or targets of technology promotion to be involved in all stages of program/project development. This starts from problem and need assessment up to program implementation and evaluation.

The approach requires process of education to enlist people's participation in all project stages. Sufficient knowledge and skills are required for project implementers. This is a development process that is people centered and ultimately contribute to people empowerment. People can structure their developmental directions, make decisions and act on it.

**Guide in Using PA**: Some basic questions must be addressed for PA to work

a. Who are the people to be involved?
b. What aspect(s) of the project/activity will people participate in? How will they participate? Will they be involved in the entire process or only in specific activities/phases of the project implementation?
c. How will you train/educate/motivate people to participate?
d. Why do we need people participation?

**Benefits of People Participation**

a. Acceptance and understanding of projects
b. Fast adoption and /or greater support to the project
c. Project sustainability
d. Protection and concern on the project
e. Advancement of the project
f. Project management by the people not outsiders
g. High benefits from the project
h. Full control of project operation
i. Less graft and corruption
j. Transparency in implementation

**2. Mass Approach (MA)**

- Utilizes strategies/methods that can reach a great number of people in a short period of time like print or broadcast media. This approach targets the mass of people whose identity and number are not known as adopters of the technology.
- There are technologies or specific products like soap, toothpaste, shampoo, toilet paper, etc. where mass approach is very effective.

**Guide in Using MA**

a. Adequate funds must be available.
b. Technologies must be simple so that adopters can use them even without assistance or guidance from extension worker.
c. Techno promotion activities can be packaged and implemented nationwide.
d. MA is basically used in creating awareness and interest among target adapters/users.
e. Provide ways of interaction.

**3. Single Purpose Approach (SPA)**

- The extension agency, it could be from the government or private group, as the initiator of technology is promoting a single technology such as organic fertilizer, corn seed, tissue cultured banana, reaper, rice seeder etc. As the term implies, the subject of promotion is only for a very specific purpose (one product/practice/technology).
- Promotion can make use of different methods and strategies, however, the focus is on the number of products disposed/sold.

**Guide in Using SPA**

a. The single technology promoted and adopted by users will not affect other practices.
b. Adoption of single technology will make a big difference in production and profit.
c. Technology is readily available, can be acquired easily and less cost.

**4. Commodity Approach (CA)**

- The agency promotes a package of technology (POT) for a specific commodity like rice, corn, soybean, super peanut etc. The POT starts from production, storing, processing, and marketing. The concept of seed to=shelf technology is the essence of the commodity approach.

**Guide in Using the Commodity Approach (CA)**

a. There must be a POT for
   a.1 Production
   a.2 Storage and Transport
   a.3 Processing
   a.4 Marketing
b. Well-trained staff in every aspect of the technology must be readily available.
c. Other factors of production are considered like capital, labor, soil, irrigation and source of quality seeds and breeds.
d. Quality and quantity are primary concerns which will contribute to overall profitability.
e. Production of great volume is planned and implemented through organized groups.
f. Strengthened farmer coops, producers, and traders.
g. Farm inputs must be controlled by farmers.
h. Explore market potentials before producing in great volume.
i. Storage must be well-planned.
j. Continuous technical assistance is necessary until self-reliance is achieved.


*SAAD beneficiaries' National Certificate (NC) II Training on Organic Farming of Technical Education and Skills Development Authority (TESDA) in Diwan, Dipolog, Zamboanga del Norte*

**Benefits of Commodity Approach**

a. Focus research and development activities on major commodities
b. For food and feed sufficiency
c. For export potential
d. Answer industry needs
e. Maximum utilization of resources
f. Credit and market support

**5. Community Approach**

- An extension agency, whether public or private, assists a community to develop in all aspects (economic, social, cultural, political and environmental). The main objective is total community development. There are several approaches in developing the community, hence, initiating agency may use a combination of commodity, participatory, multi-agency and integrated approaches to achieve holistic community development.

**Guide in Using Community Approach**

a. The local political structure spearheads and plays active role in designing the development program. The local development councils at the barangay/ municipal/city levels are mobilized as planning bodies.

b. Major problems and needs are analyzed by the Local Development Councils (LDCs).

c. Using the Internal Revenue Allotment (IRA) and other fund sources, barangay/municipal/city development plans are prepared to answer the needs of the communities.

d. All areas of concern are taken into consideration like the agricultural, non-agricultural, forest resources, water resources, social services like health, education, nutrition, peace and order, power, safety and recreation.

e. Various social institutions such as schools, church, market, government, families are involved in development.

f. Long-range plans are prepared to answer long-term needs.

**6. Area Approach**

- The target is categorized by regions. It can be categorized according to ecological zones as lowland, upland, and coastal areas. Each area has unique characteristics that are different from the others. An extension agency usually introduces different technologies according to the needs and resources of the area.

**Guide in Using the Area Approach**

a. Resource scanning/assessment should be conducted.
b. Match technology to the resource in the area.
c. Consider cultural differences and needs.
d. Large number of clientele requires more funding for travelling/mobility of extension workers.
e. If possible, modern communication facilities must be utilized.
f. Coordination between and among offices with similar target users/adopters must be done.

**7. Integrated Approach (IA)**

- The integrated approach can be used either in project or program implementation. IA puts together the services of various agencies to implement a particular program. These agencies have a common goal to uplift living condition of communities by providing basic needs like food, health, education, etc.

**8. Other Considerations on Procedures and Approaches**

Under this are considerations that can facilitate and enhance extension services.

a. **Right Approach** - You may have all the right kinds of goods to sell but if you did not make the proper and timely approach you are not likely to make sale.

*Technical Training on Banana Production in Siayan, Zamboanga del Norte*

Extension workers are sellers of ideas, hence, they should introduce their subject at the correct time and place. Extension workers need to understand and be guided with the mental process of changing one's thought or attitude. It is a fact that before people change their minds and ideas or practices, there are the elements of (i) Hearing of the idea; (ii) Seeing a demonstration of the idea; (iii) Discussing the idea and results seen among peers, relatives, and friends; and (iv) Convinced that the practice is good, and that others have tried the same and have benefited by it.

Extension workers cannot fix or determine the definite time most appropriate to explain the subject of visit. However, there are certain times during the day when farmers and women folks are in good disposition or are receptive and approachable. Experience in doing extension and research has it that in the rural areas of the Philippines, evening sessions with the rural folks are the best time for discussions. In India, having a local partner to organize and schedule meetings with the community is important.

As to the place, the homes of the clients would be most convenient though not necessarily the only place where it can take place. Making appointments with the clients may contribute to the scheme.

b. **Census Taking** - Before an extension worker starts to work, he must first proceed to take the census of the barangay where he is assigned for his own purpose. There is usually a form recommended for the purpose, requiring among others the following:

- The names of the farmer, his wife and children and their ages
- Their location or address in the barangay
- Their landholding, area and allocation
- The crops and livestock raised
- The production per hectare in the case of rise, corn, and other crops
- The mode farming
- Other essential information

This procedure is advantageous to the extension worker. It will give him an idea of farmers' (including their respective households) agricultural history which will enable him to proceed accordingly to improve their farming practices. It will give the extension worker a good picture of the kind of agriculture the community has upon his assignment which can be used as his baseline to make comparison and measure his progress and accomplishment.

c. **Starting with What They Have** – Extension work in the community needs to consider what the people have and what they want. Very often than not, additional expense to a service or technology introduced will not incite the farmers. However, when they are convinced of the benefits of an innovation, they will not hesitate to spend even without asking them to invest. The extension worker's role is to create the desire and once he has created and the people want it, they will go after it. Follow ups are also necessary to be successful.

d. **Living with Rural People** – Adopted for the first time in extension work is the deployment of the extension worker coming from the area of assignment. There are several advantages for this namely: more time is devoted by the extension worker for the community, great deal of travelling expenses is minimized, extension worker can watch and observe the farm and homemaking practices of the people closely and right there and then can make timely suggestions, and the extension worker can put into play any or a combination of teaching methods for greater impact.

e. **The First Steps** – It is interesting to see how an extension worker starts with his work of approaching and serving people. The experience of past extension workers is helpful to fledglings. Involvement in extension shows that building rapport is critical in extension work. This can start with getting to know the names of rural dwellers, which is a simple gesture but can open the avenue for communication. Then, the extension worker can introduce himself and present his business bearing in mind to start with what the farmer wants and has. The extension worker can also substantiate the subject of his business with printed materials like brochures, leaflets or pamphlets; cite cases of successful venture; and then invite the person to attend extension clubs and demonstration trips. Follow-ups are also necessary to sustain his interest.

f. **Public Relations** – Good relations is essential to succeed in agricultural and home extension. Extension work is essentially a learning-teaching process and getting people to practice what the extension worker is preaching. They should be friendly, courteous, and helpful to be of much help to people. The extension worker should practice good relations for the success of his mission.

**Ten good rules of human relations (Source: Caltex Philippines Inc. leaflet)**

1. Speak to people. There is nothing as nice as a cheerful word of greeting.
2. Smile at people. It takes 65 muscles to frown; only 15 to smile.
3. Call people by name. The sweetest music to anyone's ears is the sound of his own name.
4. Be friendly and helpful.
5. Be cordial. Speak and act as if everything you do were a genuine pleasure.
6. Be genuinely interested in people. You can like everybody if you try.
7. Be generous with praise and be cautious with criticism.
8. Be considerate with the feelings of others. It will be appreciated.
9. Be thoughtful of the option of others. There are three sides to a controversy: yours, the other fellow, and the right one.
10. Be alert to give service. What counts most in life is what we do for others.

Maintaining close friendly relations with the farmers and homemakers that the extension worker visits and serves is essential. Cultivating a certain degree of intimacy dovetailed with trust with the clients can definitely make a dent in the extension profession. With the expanded personnel now out in the field coming from the Department of Agriculture, NGOs, private groups doing extension services, they are bound to do more effective job of teaching training that would result in better farms and homes.

g. **Put Up a Project Yourself** – Extension officials are now getting local extension workers to put up their own agricultural or farm projects such as vegetable garden, orchard, piggery, poultry, mushroom and others. No one can set better examples than the extension workers themselves in their own homes or in those with whom they board. They just have to make sure that these are successful projects or the farmers will use these against them. They should set up their farms or homes as examples where they practice all the known cultural methods and devices to increase yields. This is a case in point of show casing the project for neighbors and other to see the merits of the technology and induce interest to adopt.

h. **Follow Up** – After the extension worker has acquainted the client (farmer) with the idea or plan for his adoption, the extension worker will have to sustain the client's interest to the point that he has a good grasp and accept it. But extension does not end there. It should be followed up now and then until the idea is put into actual practice. The extension worker must also acquaint him with pitfalls and failures in farming projects but with the assurance that such are temporary and should not discourage him.

*Fish Processing Training in Southern Leyte*

When there is widespread adoption, this can mean that the recommended practice is a success. When this happens, this is the fulfill ment or satisfaction for the extension worker. Extension worker may not be making enough money on their job, but the gratitude of the people that they have helped exceeds the monetary consideration that is more lasting and rewarding to a person. Extension work is infused with missionary zeal that involves some sacrifice which finds rewards not only in material things but even more important in the intangible spiritual things that count much in life.

i. **Make the Horse Drink** – There is a saying that extension is teaching. The analogy of just bringing the horse to the trough whether it drinks or not in extension work is teaching the farmers about something useful in their farming ventures and saying that extension worker's job has been done. The real essence of extension is teaching that can result on the adoption of recommended practices for the benefits of the farmers, the homemakers – the people. This is a challenge but it can be done. Even that horse can be made to drink if the workers bring it to the trough when it is thirsty. Hence, this brings to light the question of timing and using the right approach.

j. **Working out Solutions to Problems** – From time to time, the extension worker will be confronted with problems in the field some of which would seemingly do not have solutions. Just like any problem situation, it is important to be well informed of the current situation. In doing so, it is easier to determine what the real problem is and the corresponding solutions. For instance, if there is a problem of low yield in rice, the extension worker should need to determine first and foremost the magnitude and severity of the problem. In this way, a good idea of what the solution is and even the steps to be taken for implementing the solution will come easy.

## Factors to Consider in the Choice of a Teaching Method to Use

1. **Human Factor**. May include the extension worker and the client-learner. The extension worker's (as a teacher) knowledge, attitude, and experience are factors of utmost importance. The extension worker must be credible; one who is acceptable and believable to the client-learners to ensure the establishment of effective communication links. Speaking and writing are encoding skills that an extension worker must develop.

   Encoding skills refer to the ability to convert one's ideas into codes and symbols (verbal and written understandable to the learners. Similarly, decoding skills, which is the ability to translate codes and symbols should also be developed. Listening and reading are important decoding skills. Equally important is the skill of reasoning.

   The client-learner includes the farmers, homemakers, out-of-school youth, entrepreneurs, etc. Their highly heterogeneous nature makes extension teaching a challenging work. This implies the need for the extension worker to have good background information about his client-learners. Some of the ways to do this are ocular visits, survey, secondary material reviews, dialogues etc.

2. **Objectives**. Are statements of what the client-learner will be able to do after the learning activity.

   In extension education, objectives for a course should be carefully and cooperatively decided by the extension worker and his client-learner to ensure that the learning will be better appreciated, applied and adopted.

3. **Subject Matter**. This refers to what the extension worker will be presenting and discussing. The choice of the subject- matter is as crucial as the choice of the extension teaching method. Getting the attention and interest of the clientele will be a lot easier if the subject-matter caters to their needs and problems.

4. **Availability of Materials and Facilities**. The choice of extension teaching method(s) is dependent on the availability of needed materials and facilities. Teaching will not be a problem if there are available materials, equipment or even facilities needed to make the teaching more meaningful and lasting.

5. **Time Consideration**. The choice of extension method is also influenced by time --- time given to the extension worker to present a subject matter, time of the day or even the lead time of one to prepare the materials needed for the learning activity.

   One who is given more time to discuss a subject matter or even prepare the needed materials will have more options than one whose time is limited. Moreover, an extension worker who is to teach during the 'unholy' hour of

the day is faced with more challenges to keep his clientele/audience attentive, hence, need to be more careful in the choice of teaching methods.

6. **Available Budget Support**. How much fund does the extension agency have for its field operation? Does it have provision for travel of extension workers or for the purchase of supplies, materials and even equipment needed in extension teaching?

## Classification of Extension Teaching Methods

1. **Individual/Personal Contacts**. A method in which learning is done thru individual contacts. This is necessary in order to get a farmer adopt a new practice. The extension worker must know the farmer as well as his situation to have confidence in convincing or persuading to adopt an innovation. These are often associated with a request for information on a specific farm and home problem.

   Teaching methods include:

a. ***Farm and Home Visits***. This is an effective method if there is adequate number of extension workers. This develops goodwill, establishes confidence, stimulates interest and promotes public relations. Impressions can be lasting.

b. ***Office Calls***. Farmers go to an office for information assistance. This calls for an office that must be presentable and impressive where bulletins/leaflets are readily available and where charts, graphs and other relevant data are also displayed. Visitors seeking information must be attended promptly and courteously. If the information is sought belongs to another office, he must be properly guided and briefed how to get there.

c. ***Telephone Calls***, Text Messaging and Mobile Calls. Telephone calls is the most economical means of reaching people. Nowadays, mobile calls can also be utilized but in the Philippines, this is not practiced, as the cost is quite high. Text messaging may also be opted. However, the disadvantage is that the extension worker misses the actual picture of the farm and the home including the contact that is not intimate and lasting.

   Innovations in ICT for Development (ICT4D) embarked by ICRISAT based in India have made excellent strides in providing access to information by all interest groups most especially to extension services (Case 4). Various mechanisms that integrate science and technology and value chain approaches for enhancing knowledge transfers, extension and capacity building activities were developed. Through the initiatives of Dr. William D. Dar, Director General of the Institute, and his young cadre of staff from the Knowledge Sharing and Innovation (KSI), ICT solutions developed and

continuously experimented on linked farmers with other agricultural stakeholders. Some of the notable initiatives tested and refined are briefly discussed in Box 4.

d. ***Letters and Correspondence***. Communication needs to be prompt, simple, clear, brief and specific. If questions or explanations are requested, these must be promptly and comprehensively responded. There should be no delay in answering this type of extension queries or it will not serve any useful purpose. You can even follow up by a personal visit to have greater impact.

e. ***Result Demonstration***. This should be done with ample preparation. It is carried on under the supervision of an extension worker on the farm or in the home of a reliable cooperator. The cooperation agrees to keep records of the activity including the period of the demonstration where neighbors can frequently visit to observe development.

## *Case 4. ICT4D at ICRISAT*

ICT4D aims at turning the latest technological innovations into real world success stories for smallholders' farmers. Below are few ICRISAT programs on ICT for agriculture and potential new strategies and policies to enhance and sustain adoption of ICT based novel knowledge sharing approaches that contributes to the sustainable agriculture development, especially of resource poor farmers and other actors in market and value-addition chains. These innovations encapsulate the new paradigm for bringing together food security and ICT innovations in Agriculture for a food secure future through "knowledge to the poor revolution."

### Open Data and Knowledge Solutions

- **Open Access Repository (OAR)** – Provides an easy interface for researchers, practitioners, or web-connected farmers to use, build on and share research conducted at ICRISAT. Any participants or non-participants can access the OAR which provides free, immediate, permanent access to the full text of all the publications. There are more than 8,163 records. The repository witnessed 625,930 downloads from 105 countries.

In general, Open access means the freedom one enjoys in accessing any sort of information, anywhere and at any time. It is basically the freedom to read and download the papers on any topics which are published on the particular website. ICRISAT is one the very first centers among all CGIAR centers that adopted the open access policy of its learning resources.

- The **Open Data Repository** enables the availability of open data to global community. There are 464 data files in more than 9 dataverse with 59 studies.

  The Open Data movement provides a leveraging effect on data, collaboration, and innovation that have been proved useful in accelerating crop improvement for sustainable food production particularly in the marginal environments of Asia and sub-Saharan Africa.

- **The KSI Connect**: A Virtual Knowledge Series Platform from ICRISAT highlights the most important projects, cutting edge research and fascinating success stories to a global audience in the form of open information and educational video resources, face to face virtual training and learning sessions and virtual expert-farmer interactions.

- The **AgED Open Courseware platform** - offers a research infused curriculum providing life-long learning opportunities to students, faculty members, extension agents, smallholder farmers etc. through open educational resources- anywhere and anytime — in a cost effective manner. It is an innovative learning platform for global learners, which engages them in lifelong learning mode.

  AgED Open CourseWare is developed using an open source learning management system called Moodle. The platform not only hosts ICRISAT courses but also allow partners to host their courses. It has become very popular among educators around the world as a tool for creating online dynamic web sites for students.

  Currently, the AgEd Open Courseware has 7 ICRISAT Courses, 11 FAO Short Courses, 1 SEWA Learning Modules and more than 6,300 Learner-Participants from around 160 Countries.

## Empower Smallholder Agriculture through ICT Mediated Extension Systems

The current yields in the smallholder farmers' fields are well below their potential; the yield gaps vary by anything between 100-300% across different crops. An important factor is the lack of awareness of, and lack of access to, high quality inputs such as seed, fertilizer, and agro-chemicals. Furthermore, smallholder farmers do not employ improved crop management practices and their post-harvest management strategies are inadequate primarily due to a lack of knowledge. Farmers are also marginalized from participating in markets due to unreliable productivity, a lack of market information, and weak market linkages.

Farmers need to be able to access and effectively use the right information at the right time. Although classic traditional extension system failed to meet this need, the rise of new ICT tools and devices have enabled modern ICT mediated extension more efficient and farmer-friendly, with real-time advice.

Information systems, linking research, extension and markets, have been developed. For example, "Krishi Gyan Sagar and Krishi Vani powered by the GreenSIM" brings out the best of affordable technologies, knowledge solutions, availability of quality inputs, credit and insurance at the doorsteps of smallholder farmers, anchored on public-private partnership.

- Krishi Gyan Sagar is a pull based ICT mediated extension system, which supports both tablet/smart phone as well as web. The app for tablet/ mobile consists of various modules for providing several personalized information and input delivery services to the farmers.

  In addition to this, the web based application helps to generate quick reports, market intelligence, intelligent decision support system and acts as a proficient Monitoring and Evaluation (M&E) tool.

- Krishi Vani is a Push based, mobile mediated agro-advisory platform that delivers 35 free voice messages per week per farmer in 16 categories (weather, market, crop information, government schemes, nutrition, health etc.) in regional languages. Through this application, generic advisories are delivered to groups of farmers in a location on the mobile phone owned by them and enabled by Green SIM.

The project observed great impacts on the smallholder farmers. More than 40,000 smallholder farmers in 171 villages have been receiving benefits from this project in a span of six months. It contributed to bringing forward info-entrepreneurs as new professionals to strengthen the traditional agricultural extension system. It also provided an opportunity to the rural women/youth to gain additional income as info entrepreneurs. The project received the Flame Award 2013, instituted by the Rural Marketing Association of India (RMAI) for showcasing innovative use of technology of the decade.

## Next Generation Innovations

The rise of new ICT devices such as tablets and smart phones will certainly create new opportunities for user-friendly information tools for better agricultural advice services and inform farmers about quality inputs and market access.They will also create job opportunities for info-entrepreneurs that can create crucial added value for farmers. KSI, at ICRISAT strongly believes in a financially sustainable 'backbone communication network' that can be developed with advanced ICT tools anchored on people-public-private partnerships to improve the quality and convenience of information (crop, market, weather and user's choice) dissemination to smallholder farmers and transparency within the value chains.

ICRISAT has recently launched two next generation initiatives:

- Green PHABLET powered by the Green SIM is an electronic device integrated with phone and tablet (Phablet) technology, coupled with other required components for use of agriculture data information-knowledge aggregation and dissemination and also support for many other usages. The device comes with unique features like water resistance, dustproof, shock proof, break proof, sunlight readability etc. The GreenPHABLET powered by the Green SIM is an ICT mediated tool for modernizing agriculture extension to address the challenges of infrastructure and human resources by creating info-entrepreneurs, to deliver knowledge solutions and quality inputs at smallholder farmer's doorsteps through voice advisory services and mobile money.

## KSI contributions towards knowledge to the poor revolution

The KSI team at ICRISAT has been executing novel ideas that have had global implications, impacting communities of farmers, researchers, scientists,

countries, cutting across regional and national boundaries. Several services, such as the mobile advisory services, are provided in regional languages – ensuring that language is not a barrier.

Implementation of various innovative knowledge sharing platforms like KSIConnect, AgED Open Courseware, Open Data and knowledge repositories; GreenPHABLET powered by the GreenSIM, and the next generation of ICT innovations will be beneficial to the smallholder farmers and several other stakeholder, by going beyond the norm and providing them with various services ranging from agro-advisory information to providing quality inputs (on seeds, fertilizers, pesticides, credit and insurance) and other services such as, access to markets and information on farmer and agri-business entrepreneur support systems.

Providing these knowledge services could be financially viable for info-entrepreneurs through provision of incentives for their services either through private sector corporate social responsibility or business models by bringing reforms in the supply and distribution channel for a win-win situation.

*Source: Dileepkumar G. 2014. Knowledge to the poor revolution taking high-end scientific knowledge to the farm fields through innovative ICT tools and knowledge sharing approaches for a food secure future. In: Proceedings of the Winter School on Livestock Based Livelihood Options: Current Status, Emrging Issues and Future Scenario in Combating Crisis. Nov. 7. New Delhi, India.*

2. **Group Contacts/Group of People**. A method to assist in moving people from awareness to interest stage and sometimes to a theoretical stage of accepting new practice. An approach that involves contact with a substantial number of people assembled in a place or in a series of related groups.

   Teaching methods include:

a. ***Lecture***. A trainer or a resource person before an audience delivers an oral presentation on a given subject. A lecture is basically a means of sharing information the learners need to know. The main purpose of the lecture is to: (i) inform and transmit to participants about a specific subject matter by means of an oral communication, (ii) explain the application of rules, principles, or concepts, and (iii) review, clarify, emphasize, or summarize a given topic or subject matter.

b. ***Group Discussion***. These meetings are undertaken to provide opportunity for members of the group to exchange experiences, ideas and point of view.

   The advantages of this method are several: (i) It is a democratic process-group thinking rather than ideas or knowledge one individual; (ii) Group interests and problems are discovered; (iii) In discussion groups, leaders are discovered. Group planning and group action are promoted; (iv) Method is simple where the topic is presented with brief description of the situation without letting personal feelings get into the picture; (v) The discussion leader keeps in the background and serves only as a coordinator; he keeps the discussion alive; he summarizes the matter discussed from time to time emphasizing important or significant facts.

c. ***Field Trips or 'Lakbay- Aral'***. People like to visit other places. This is true with rural people where there is ardent interest in seeing other farms and homes to see differences in practice. This can entice adaption of other or new practice. Field trips are organizing to visit nurseries, demonstration stations, experiment stations or pilot farms.

   This method may be expensive but it is intensely educational and effective in making people put into practice what they see and observe in these visits or tours. It also develops acquaintances and mutual desire to help one another. To be of utmost advantage, field trip or Lakbay-aral should be well planned.

d. ***Conference***. It is a meeting of individuals, preferably a small number usually in round situation, who meet for a specific purpose where participants exchange views.

   A good conference demonstrates the following: (i) Conference is held for a purpose; (ii) Leader should be democratic rather than authoritarian; (iii) It involves conflict to engage the group to more discussion to generate more ideas.

e. ***Role Playing***. It is a method of adopting roles from real life other than those being played by the person concerned and understanding the dynamics of those roles. The technique of role-playing offers an opportunity for practicing skills in 'doing' and 'implementing'.

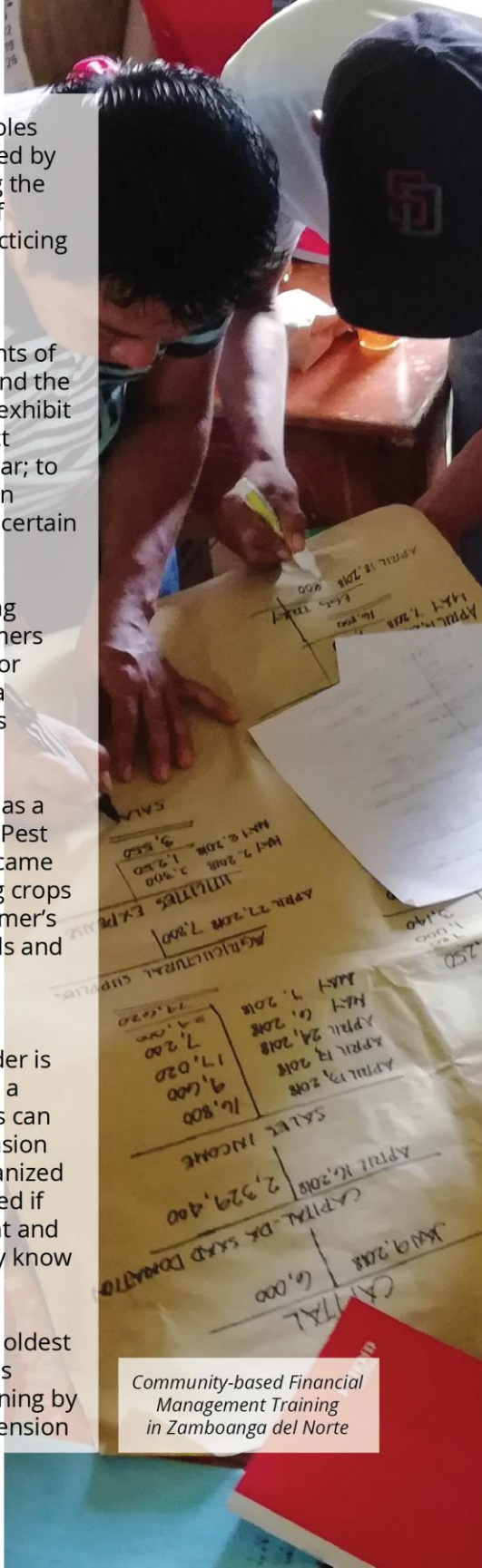
f. ***Achievement Days***. Held to give public recognition to worthwhile accomplishments of the extension office, farmer-cooperator and the like. The purposes of this method are: to exhibit the significant outputs/products of project undertaken during a particular season/year; to give recognition to outstanding partners in development; and to demonstrate how a certain new skill or product is done.

g. ***Farmers Field School***. This is a season-long training conducted in the field where farmers are encouraged to explore and discover for themselves new technologies/options in a systematic manner and to make decisions based on their own learning.

   The FFS was first introduced in Indonesia as a way of training rice farmers in Integrated Pest Management. Since then, the concept became popular in many Asian countries involving crops other than rice. This is to enhance the farmer's problem solving and decision-making skills and to familiarize farmers with the ecological processes utilized in crop production.

h. ***Leadership Training***. The use of local leader is another method that can be availed of by a good extension worker. Volunteer leaders can be an immense help in the national extension program if they are properly trained, organized and guided. Better results may be expected if the project is undertaken with the consent and support of trained local leaders since they know better than outsiders.

i. ***Method Demonstration***. This is, if not the oldest teaching method in extension service. This method emphasizes the principle of "learning by doing". It is easy to learn things if the extension



*Community-based Financial Management Training in Zamboanga del Norte*

worker "tells how" and "shows how" the skill is being done. This strategy also provides the extension worker with the opportunity to see, hear and discuss the learning progress on a particular skill with clientele(s). This is used to help client gain skill in doing things in a correct way. More specifically, a method demonstration as a method of teaching is used to attain one or a combination of the following purpose to:

- Clarify or stress a point, when the verbal explanations seem inadeqluate or limiting.
- Show how to do or perform the procedures involved in preparing a product (as in cooking) or a skill like how to caponize a cockerel, how to use a particular machine, how to graft a seedling. Promote confidence among the audience that they can do or perform the procedure as demonstrated.
- Save time.
- Increase the client's interest.
- Complement other instructional strategies like in a lecture or discussion.

3. **Mass Approach/Masses of People**. This method is mainly for the purpose of getting awareness and interest of the people in some new practices. This approach does not involve face- to face contacts. These are the methods employed by extension workers in disseminating information to influence a large number of people at a time.

   Teaching method includes radio, television, print media, field days, and exhibits.

a. **Radio**. This is an excellent medium for doing extension work and rural people value it very highly. The development of transistor radio has expended and multiplied the utility of the radio. For little or no cost, you can reach masses of people. Radio may not take the place of meetings, demonstrations, publications, news stories, and personal visits, but can be the means of increasing the effectiveness of all other media. Radio is an excellent medium for doing extension work and rural people value it very highly. As a source of news and information it has practically no equal in swiftness and cost. Extension workers use this to disseminate timely information on sources of seed materials, market conditions, improved farm and home practices, new findings in agriculture, and other valuable information to both producers and consumers. The use of radio in the extension teaching closely parallels the use of the news story, with a single important exception. The radio talk involves oral presentation heard by the listening audience while the news story is seen and read by those who are subscribers of newspapers magazines. There are advantages and limitations of the radio media. While it can reach more people quickly than any other means of communications and is peculiarly fitted to handling of emergency and timely information for little or no cost at all, broadcasting facilities are not available in all provinces, extension loses out to the commercials in most

cases, and it is difficult to check on results.

b. **Television (TV)**. Extension service has tapped the TV on several occasions and will continue to do so. With the passing years the use of the TV will become more popular. The advantages of the TV over the radio insofar as extension is concerned is that the Extension Worker can give a "how–to–do–it" method of demonstration, which is not always possible in a radio. It is an effective media in a face-to-face approach of the masses, reaching both urban as well as rural people. However, there are also disadvantages such as intense competition with the entertainment program (including commercials) in which individual family members may be interested in and cannot be avoided, and it is relatively more expensive than the radio.

c. **Print Media (Bulletins, Pamphlets, Circular, and Leaflets)**. These materials continue to play an important role in the present day system of mass communication most especially to extension workers and teachers. Print media supplements other extension media, methods and techniques such as demonstration, conferences, lectures and field trips. These are distributed to interested parties who may call, write, or request for such materials. Print media furnish ready answers to doubt or queries. All it takes is for the extension worker to get the materials on the subject matter of inquiry and send or mail these. The responsibility of providing the publications needed for teaching purposes by extension worker rests largely with subject matter specialists. This is because they are in the best position to interpret the findings and problems existing in rural areas.

   All teaching devices have its advantages and limitations. While the printed materials can be kept and read at the pleasure of the reader, some are not at all. And if these are read, these are not fully understood especially in areas of poor literacy. There is also the possibility that information may not fit into the local situation or condition. Printed matters are impersonal.

d. **Exhibits**. In extension work, exhibit is a helpful means of inciting interest or acquainting of people with extension activities and what it aims to do. Making a particular kind of exhibit to attract and teach the general public may require some expenditure and time to plan and prepare the necessary articles, how to set it up, where to put it, provide the personnel to conduct it for the duration of the fair, field day, anniversary, achievement days, etc.

   In exhibitions, posters, photograph enlargements, models, drawing and other devices are availed to emphasize the principal object of the extension work, says Kelsey and Hearne in their book on cooperative extension work (Mabutas et. al.,1978).

   In extension exhibits, the definite purpose must be constantly projected, the subject carefully selected and properly presented so as to hold attention and,

if perishables are displayed, they should be replaced from time to time depending upon the duration of the occasion. Overstuffing the booth with exhibits should be avoided.

e. **News stories**. The function of the news story in extension teaching is primarily one of stretching worker must consider how the use of news story might strengthen his teaching plan and how it will make acquaintance with the local reporters, determine the type of news story, outline a calendar for writing news stories that will be timely or seasonal, use local pictures, follow logical steps in preparation of news story copy and maintain file of clipping according to projects.

## Other Extension Methods

There are other teaching aids in extension work such as the following:

- Flannel graphs
- Flashcards
- Charts and graphs
- Blackboards and other visual aids

These may be availed of by the resourceful extension workers if and when they are available and are needed for a particular purpose, keeping in mind that the net result of these different methods and techniques is to stimulate people to make changes that would result in better farming and home-making practices and improving their social and economic conditions. Whatever the extension worker does while conducting a demonstration is his show and the outcome thereof is his responsibility.

*Exposure Training on Mallard Duck Production in Maguindanao*

# UNIT 7

## Program/Project Development

### Plan, Program, and Project: Concepts and Characteristics

1. **What is a Plan?**

   - Is a written document covering specific period of time, that contains the organization/ agency's vision, mission, goals, program thrusts, projects, approaches and strategies, policies and rules, structure, linkages, man power and funding requirements.

- Is typically any diagram or list of steps with details of timing and resources, used to achieve an objective to do something.
- Reflects what an individual/group/organization would like to do and achieve at specific period of time.
- The development plan can be personal, organizational, agency or at a barangay/municipal/city.
- Can be short-range, medium-range or long-range as based on time duration.

### Examples of Plan

| | |
|---|---|
| Province | La Trinidad Ten-Year Development Plan |
| Government Agency | Department of Agriculture Development Plan |
| Cooperative/People's Organization | The Baguio-Benguet Community Credit Cooperative (BBCCC) Three-Year Development Plan |
| Barangay (Local Government Unit) | Barangay Cabinet Hill Five-Year Development Plan |
| City | Baguio City Medium |

2. **What is a Program?**

- Is a group of related projects managed in a coordinated way to obtain benefits not available from managing the projects individually.

- **Composed of cluster of projects** to be undertaken, which when combined together will accomplish a broader pre-defined goals.

Example: A Government Development Plan is composed of the following programs:

- Infrastructure Program
- Research Program
- Institutional Development Program
- Administrative Program

3. **What is a Project?**

- An endeavor in which human, material and financial resources are organized to undertake a unique scope of specified work within given time and costs, so as to achieve beneficial change expressed in qualitative and quantitative objectives.

- Is a discrete piece of work undertaken by an organization or by a group of collaborating organizations, usually with a defined target group in a particular location.

## Program/Project Development

- Is a process that starts from situation analysis up to the appraisal of program/project accomplishments (Figure 10).

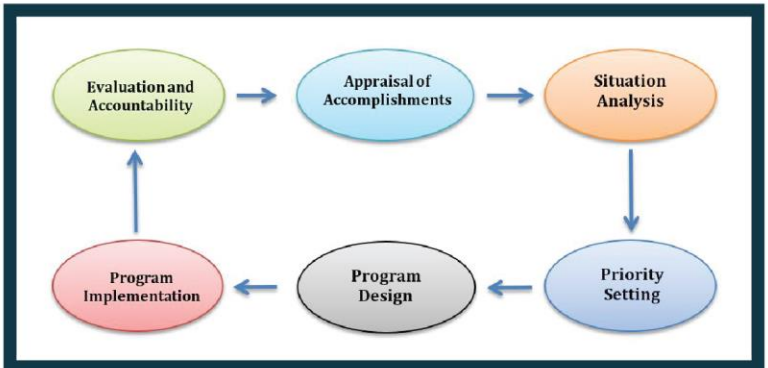



*Figure 10. Program/project development cycle*

*A two-day technical training on Natural Farming Systems in Barangay Diwan, Dipolog City, Zamboanga del Norte*

## Kinds of Project

1. Health and Nutrition
2. Food Production
3. Infrastructure Development
4. Sports and Cultural Development
5. Job Placement
6. Spiritual Development
7. Justice, Peace and Order
8. Education and Technology Transfer
9. Population Education and Environmental Production and Conservation

## Characteristics of Program/Projects in Extension and Rural Development

1. Political leaders' vision and mission influence programs/projects.
2. Programs are influenced by the priorities of the assisting organizations/agency.
3. Programs require multi–agency collaboration.
4. Programs, although funded by external agencies, require LGU leadership and supervision.
5. Programs need participatory strategies from planning, implementation up to evaluation.
6. Programs/Projects are market-driven, technology-based, people managed and initiated.
7. Programs give direct effects on productivity, efficiency, improved product quality and greater revenue.
8. Programs are categorized according to Local Government Code (1991) priorities.
9. Programs/Projects are interventions to solve people's need and problems.

## Program Planning Process

There are many ways of planning. When planning bodies are already recognized / designed / elected / appointed, the next activity is planning. Planning is basically a decision-making process. It is deciding in advance what to do, when to do it, how to do it, who will do it, why, and how much is needed? It is forecasting future activities. Plans are made because there is a need to ensure effectiveness, efficiency, and success to achieve satisfaction.

## Steps in Extension Program Planning

1. Identifying target area and people
2. Resource assessment
3. Problem identification and prioritization
4. Objective formulation
5. Actions to be undertaken (programs, projects, activities)
6. Strategies of Implementation
7. Identifying people to be involved
8. Duration
9. Estimating budget needed and source

## Reasons for Planning

1. Plans guide implementation on what to do, who will do it, when to do it, how much funds is needed.
2. Plans are prepared for submission for funding.
3. Plans are bases for monitoring, documentation and evaluation.
4. Plans are bases of performance evaluation.
5. Plans minimize errors/failures in implementation.
6. Plans are bases for fund allocation additional fund sourcing.
7. Plans inspire people to work hard. It motivates/ challenges people.
8. Plans justify hiring people; specify qualification needed and number of people to be hired.
9. Plans can be used as bases for revision, improvement or stoppage of the projects.
10. Plans are made for optimum utilization of human, physical, financial and institutional resources.

## Principles in Program Planning

1. **Problems and Needs - Based Programs** – Programs and projects in extension and rural development are based on existing problems and needs affecting great number of people.

There is need to perform problem analysis in order to identify causes of core problems which need priority attention. The people must be able to participate in prioritizing the program/ project that will answer recognized problems and needs.

2. **Resource Availability** – Are resources needed in the project available? If not available, can the community buy these resources in nearby areas? Are we going to have continuous supply? Can the community produce or make money in producing the resources?

3. **Technology Availability** – Do we have available technology that can be acquired by target users? Are they free or sold? Where do we get the technology? Do we need to modify the technology according to our needs? Users of a technology usually consider the following characteristics.

4. **Funding Requirements and Sources** – Program/ Projects require initial investment as well as operating expenses. The funds needed are primary considerations in selecting the project. This is the reason why some communities implement small and not so relevant project due to inadequate funds. Start small with some economic and social projects. Implement projects by phase, if possible.

5. **Committed, Innovative and Aggressive Planners** – There is a saying " Kung Gusto may paraan, kung ayaw maraming dahilan." (If you want to pursue a project, there are always means to do it; but if you do not like a project, there are many reasons for not doing it). There are various ways of solving problems. Required are desire, commitment and determination to solve the problems.

6. **Programs Linkages and Partnership** – Can be implemented best if there is partnership between and among stakeholders like government leaders, private sectors, researchers, input suppliers, buyers, banker and producers. Mutual and sincere linkages must be established in a business-like manner.

7. **Coordination and Cooperation** – Program planning requires cooperation from various sectors and strong coordination in order to avoid duplication of efforts/projects and attain efficiency in the use of scarce resources.

8. **People First** – All programs must contribute to the development of people first and foremost. This is the primary and ultimate consideration.

9. **Project Sustainability** – Projects must be sustainable, which means continuity and viability of projects for a long-time and with minimum destruction on the environment.

10. **Programs/Projects must not only be: SMART but SMARTEST**

S - specific (specific to the objective it is supposed to measure)
M - measurable (measurable either quantitatively or qualitatively)
A - available/achievable (available/achievable at an acceptable cost)
R - relevant (relevant to the information needs or should match up with your core values)
T - time-based (so we know when we can expect the objective/target to be achieved
E - evaluate (evaluate goals every single day, you'll be much more likely to achieve them)
S - significant (state why you care about this goal)
T - transforming (fulfilling our own purpose and living our own mission, we are living someone else's dream, fulfilling someone else's desires and meeting someone else's goals)

## Program vs Project

Many people are uncertain about the difference between a project and a program. It is also important that management consultants use consistent terms and language when describing work to be undertaken in order that the client can understand the nature and scale of the consulting intervention that will be required. Although many of the change management considerations are common between a program and a project, the nature of the consulting work required to support each type of initiative is quite distinct.

*Fiberglass-Reinforced Plastic Boats Frabrication Training in Antique*

*Table 5. Areas of difference between a project and a program.*

| Particulars | Project | Program |
|---|---|---|
| Objectives | Outputs – tangible; relatively easy to describe, define and measure; tending towards objective. | Outcomes – often intangible; difficult to quantify; benefits often based on changes to organizational culture and behaviors; introducing new capabilities into the organization; tending towards subjective. |
| Scope | Strictly limited; tightly defined; not likely to be subject to material change during the life of the project. | Not tightly defined or bounded; likely to change during the life cycle of the program. |
| Duration | Relatively short term; typically three to six months. | Relatively long term typically eighteen months to three years. |
| Risk Profile | Project risk is relatively easy to identify and manage. The project failure would result in relatively limited impact on the organization relative to program risk. | Program risk is more complex and potentially the impact on the organization if a risk materializes will be greater relative to project risk. Program failure could result in material financial, reputational or operational loss. |
| Nature of the Problem | Clearly defined. | Ill-defined; often disagreement between key stakeholders on the nature and definition of the problem. |
| Nature of the Solution | A relatively limited number of potential solutions. | A significant number of potential solutions with often with disagreement between stakeholders as to the preferred solution. |
| Stakeholders | A relatively limited number of stakeholders. | A significant number of diverse stakeholders; probable disagreement between them as to the definition of the problem & the preferred solution. |
| Relationship of Environment | Environment within which the project takes place is understood and relatively stable. | Environment is dynamic; and program objectives need to be managed in the context of the changing environment within which the organization operates. |
| Resources | Resources to deliver the project can be reasonably estimated in advance. | Resources are constrained and limited; there is competition for resources between projects. |

# UNIT 8

## Management of Training in Extension

A need to study and analyze training needs of communities and industries. This leads to the development of demand-driven training programs.

### Types of Training

1. **According to scope or sector**: International, National, Regional, and Local
2. **According to level of management of participants**: Top management, Middle management, and Low-level management
3. **According to purpose**: Orientation, Skills training, Basic training, and In-service training
4. **According to subject** matter or discipline: Crop production training, Management training, Training on research methodologies, and Marketing training
5. **According to group of participant-trainees**: Producers, Technicians, Specialist, Researches, Managers, Youths, and Students
6. **Other classifications**: Entry training, In-service training, Project-related training, and Self-development training

### General Purpose of Training

1. Acquire knowledge from the learning process.
2. Develop skills of their ability to do the work.
3. Sharpen their techniques, which usually involve the application in the situation of both knowledge and skills.
4. Develop/change their attitudes towards their work and work organization.
5. Gain experience as a result of participating or applying the knowledge, skills and techniques over a period of time and often in a number of different situations.

## Training Program Development

1. **The Pre-Training or Planning Phase** – during this stage the composition of the Training Management Team (TMT) is effective. The expertise of the potential members is considered for effective conduct of training.

The activities in the planning phase are:

a. Organizational Study
b. Assessment of training needs
c. Formulating training objectives
d. Determining the course content and methodology of the training program
e. Scheduling of training activities
f. Preparing and reproducing training materials
g. Monitoring and evaluation
h. Estimating the budget

2. **The Training Implementation Phase** – the activities usually done in the implementation stage are:

a. Actual Conduct or delivery of the training
b. Application of appropriate training methods
c. Utilization of training materials and media
d. Establishing training- learning situations between the resource persons and participants and training management team

3. **The Post- raining Phase** – at the post-training phase, a summative evaluation and follow-up activities are undertaken. A summative evaluation is conducted at the end of the training by the management staff and participants. It aims to determine the following:

a. Attainment of the training objectives
b. The relevance, usefulness, and importance of the topics to the participants
c. The appropriateness of the methods
d. The performance of the participants, resource persons and training management staff
e. Comparison of actual outputs and desired outputs

Result of the evaluation may serve as the guide or basis for subsequent training activities. A follow-up of the trainees should be undertaken to see what changes in job behavior took place as a result of the program. The tangible results of the training program in terms of job
performance are determined.

## Three sets of conditions for successful field management

1. Support Systems
2. Organized Work
3. Regular Reporting

## Management is associated with the acronym 'POSDCORB' which stands for:

- **P**lanning
- **O**rganizing
- **S**taffing
- **D**irecting
- **C**oordinating
- **R**eporting
- **B**udgeting





1. **Support Systems**

   - A referral and support system of specialists
   - A clear line of administrative responsibility


2. **Organized Work**

   - Fixed schedules
   - Regular training meetings
   - Regular in-service training
   - Feedback utilization and recognition


3. **Regular Reporting**

   - Plan of work and accomplishment reports
   - Records on farmers (e.g. crops, credit, markets)
   - Record on rural agricultural development needs (e.g. social services and infrastructure needs)

# UNIT 9

## Community Development Approach

### Introduction

Community development (CD) is a process by which a civil society is **strengthened** or **empowered** to address their needs. Needs assessment is important in order to do prioritization of community needs. It seeks the empowerment of local communities, taken to mean both geographical communities, communities of interest or identity and communities organizing around specific themes or policy initiatives. By empowering or strengthening, this means:

- enhancing the capacity of people as active citizens through their community groups, organizations and networks; and the capacity of institutions and agencies (public, private and non-governmental) to work in dialogue with citizens to shape and determine change in their communities, and
- supporting and promoting the autonomous voice of disadvantaged and vulnerable communities. It has a set of core values/social principles covering human rights, social inclusion, equality and respect for diversity; and a specific skills and knowledge base.

Good CD is action that helps people to recognize and develop their ability and potential and organize themselves to respond to problems and needs, which they share. It supports the establishment of strong communities that control and use assets to promote social justice and help improve the quality of community life. It also enables community and public agencies to work together to improve the quality of government.

### Key Concepts and Philosophy of CD

1. **Community**

    - Comes from the Latin word, *'communitas'* which means as common.
    - A group of people living in same geographical location, sharing a common cultural heritage, language, beliefs and interests.
    - People who live within a geographically defined area and who have social and psychological ties with each other and with the place where

they live.
- Denotes a specific geo-graphical area, to others a social system, and to still others a set of cultural values which people share.

2. **Development**

   - Involves change, improvement and vitality – a directed attempt to improve participation, flexibility, equity, attitudes, the function of institutions and the quality of life. It is the creation of wealth – wealth meaning the things people value, not just dollars. It leads to a net addition to community assets, avoiding the "zero sum" situation where a job created "here", is a job lost "there".
   - Development" is a process that increases choices. It means new options, diversification, thinking about apparent issues differently and anticipating change.

3. **Public Participation**: How is a community motivated to effect change? Who in the community should get involved?

   Four Types of Public Participation: Public action, Public involvement, Electoral Participation, and Obligatory Participation:

   a. **Public action** is the type of participation in CD. The activities are initiated and controlled by citizens, with the intent of influencing government officials and others.
   b. In the CD process, the role of **public involvement** may start with public action and shift to public involvement, depending on the organizational context and "ownership" of the process. Generally, public action is the category of public participation on which community-based organizations (CBOs) focus.
   c. **Electoral participation** is probably the most limited form of participation as it focuses just on the act of voting.
   d. **Obligatory participation** is initiated and controlled by government officials. This type of public participation can have a meaningful impact on the quality of life and may ultimately lead to a community-initiated effort.

*Sloping Agricultural Land Technology (SALT) Production Training in Calanasan, Apayao*

• Inclusiveness


- Social inclusion in general refers to the involvement of wide range of social groups (also the vulnerable ones that can easily be excluded) to different spheres of life by improving the accessibility to public and private services. Accordingly, socially inclusive planning puts the emphasis on the residents and their groupings and on the inclusion of the socially weaker parts of them.
- **Inclusion** continuously creates a community involved in defining and addressing public issues; **participation** emphasizes public input on the content of programs and policies.

4. **Power**

- Power in a community is the ability to affect the decision making process and the use of resources, both public and private, within a community or watershed group. Power is simply the capacity to bring about change. It is the energy that gets things done.
- The concept of **shared power** is being recognized as representing a more sustainable and effective approach. Power, used in implementing locally led conservation, should be viewed as the ability of citizens and civic leaders to bring together diverse community members in initiatives that lead to real, measurable change in the lives of their community.

## Philosophy of CD

- Work based on "felt needs."
- Work based on assumption that people want to be free from poverty and pain: a) security, b) recognition, c) response, d) new experience.
- It is assumed that people wish to have freedom in controlling their own lines and deciding the forms of economic, religious, education and political institutions, under which they will live.
- People's values given due consideration.
- It is presumed that cooperation, group decision-making, self-initiative, social responsibility, leadership, trustworthiness and ability to work are included in the program.
- Self-help.
- People are the greatest resource.
- The program involves a change in attitude, habits, ways of thinking

relationship among people in the level of knowledge and intellectual advancement of people, changes in their skills, i.e. practices of agriculture health etc.

**Community Organizing (CO)**. Is the process of building consensus around community issues. It can involve raising the public consciousness about a matter of concern, gathering people together to work for a common goal or to receive specialized services. Community Organizers gather information, educate the public, introduce neighbors, train new leaders, and bring people together.

## Stages in CO Process

**Stage 1. Entry into the Community.** Community entry is the process where the Community Organizer (CO) officially enters the community. During community entry, the Community Organizer (CO) is introduced to local authorities and other key people in the community. It is the first step by the Community Organizer (CO) towards integration into the community.

**Stage 2. Community Immersion.** Is the process of staying and living together with the people in the community and experience their way of life. Through community immersion, the Community Organizer (CO) will gain better understanding of the people and their situation. The people will also be able to know the Community Organizer (CO) better and mutually develop good relationships with each other.

**Stage 3. Core Group Formation.** A "Core Group" is made up of 5-7 individuals from the community selected and recruited by the Community Organizer (CO) to help facilitate the formation of the "Community Based Organization (CBO)". The "Core Group" works together with the Community Organizer (CO) and provides community leadership towards the formation of the "Community Based Organization (CBO)".

**Stage 4. Formation of the Community Based Organization (CBO).** A "Community Based Organization (CBO)" is an association of people living in the same geographic location. The "Community Based Organization (CBO)" is a structure that provides people with opportunities to work together to solve common problems affecting their lives.

*Upland and Rainfed Rice Production and Processing Training in Masbate*

*Fish Processing Training*

**Stage 5. Community Capacity Building.** Is the process of developing and strengthening knowledge, skills and experience of the CBO leaders and members. Developing the capacity of the CBO leaders and members will ensure greater community participation, self-reliance and sustainability of the organization.

**Stage 6. Participatory Community Research.** Is the process of identifying, analyzing and prioritizing community problems and their possible solutions. The "PCR" enables community members to identify community needs, resources and priorities towards problem solving.

**Stage 7. Community Planning for Problem Solving.** Is the process of developing a community action plan based on priorities, objectives and resources towards community problem solving. Community planning provides opportunities for the community members to participate in decision-making, thus ensuring ownership of the problem solving process. It also enables them to identify and formulate solutions to their common problems together.

**Stage 8. Community Resource Mobilization.** Is the process of utilizing people and their resources towards accomplishing desired changes in the community. The community needs resources in order to implement its projects and activities. "Community Resource Mobilization" enables the community to maximize the use of available local resources towards achieving problem solving objectives. External resources should only be utilized if local resources are not available.

**Stage 9. Project Implementation.** The "Community Action Plan" is the vehicle to achieve desired community changes. A regular monitoring and evaluation process will ensure effective achievement of activities and desired results.

**Stage 10. Exit From the Community.** Is the process whereby the Community Organizer (CO) gradually leaves the community as the "Community Based Organization (CBO)" moves towards independence and self-reliance. The "Community Exit" strategy enables the "Community Based Organization (CBO)" to grow and gradually develop into a mature self-governing and self-reliant. At the initial stage of Community Organizing process, the CO takes a major role in leading the CBO in the problem solving process. As the capacity of the CBO leaders and members gradually develop, they should assume more responsibilities and move towards becoming independent and self-reliant. The role of the CO should then change from initiating, leading and managing to facilitating and coordinating of development activities.

# UNIT 10

## SOCIAL PREPARATION:
## A Gizmo to a Sustainable Agriculture System of SAAD

There are four fundamental strategies to address community problems: community organizing, advocacy, service delivery, and development. There is no right or wrong strategy - each organization has to choose among them constantly. Each group should specialize the skills needed to do a good job through a combination of strategies. What is important is what you're doing - that the method matches the strategy you've chosen and they both match the mission the group has adopted.

The initial step in **community organizing** is the **social preparation** activities. The series of activities is design to prepare the affected families to cope with the changes brought about by government programs or development projects and to encourage them to actively participate and prepare their society, community and personal responsibilities in their quest for tenurial security, human development and basic services, employment and livelihood, and other government programs for the urban poor.

While it is true that community organizing is characterized by mobilizing of volunteers, staff roles are limited to helping volunteers become effective, to guiding the learning of leaders through the process, and to helping create the mechanism for the group to advocate on their own behalf and always includes confrontations.

Community organizing strategies include meeting with corporate or government decision makers to hold them accountable for their actions, designing programs for others to implement the necessary needs of the community, and aggressive group action to block negative developments or behaviors. Rural and even urban dwellers are continuously in need of advice and information to address issues and constraints of their farm-related livelihood system. This explains the requisite of basic principles in doing extension work where this will form part of their future professional responsibility.

Community organizing is the process of building power through involving a citizenry who lives in proximity to each other and comes together into an organization that acts in their self-interest in: identifying problems they

share and the solutions to those problems that they desire; identifying the people and structures that can make those solutions possible; enlisting those targets in the effort through negotiation and using confrontation and pressure when needed; and building an institution that is democratically controlled by the community that can develop the capacity to take on further problems and that embodies the will and the power of that citizenry.

The Department of Agriculture through its local program, the Special Area for Agricultural Development (SAAD) instituted in 2017 have one of its components, Social Preparations. The main objective is to empower marginalized farmers and fisherfolks through series of meetings and trainings (including needs assessment) in order to ensure readiness of SAAD beneficiaries in accepting and managing the project in collaboration with partners (local government units, private sector, and other government agencies and stakeholders) in the 30 poorest of the poor provinces with highest poverty incidence of the country.

The said program intensifies production and livelihood interventions to pro-poor growth and proactive investment in poverty reduction, food security, nutrition, and enterprise. Most have also committed to social development goals, such as equitable development, gender equality, social protection and peace. Agricultural development is activity-based that encompass investments in land and water, crops, livestock, forestry, fisheries, natural resource management, commodity trade and agricultural employment through social analysis.

Social analysis is the practice of systematically examining a social problem, issue or trend, often with the aim of prompting changes in the situation being analyzed. Social analysis is instrumental in designing and implementing successful pro-poor policy and institutional reforms and poverty-targeted investment programs and projects. It is fundamental for understanding the complexities of social diversity, gender and the various dimensions of poverty (e.g. low income, lack of assets, vulnerability, exclusion, powerlessness, lack of voice and an inability to withstand shocks).

The social analysis perspective enables planners and practitioners to put the human dimensions – stakeholders, target groups, intended beneficiaries or other affected people – at the center of development interventions to cope with changes brought about by the development projects.

With the majority of the country´s poor living and working in rural areas, investment in agriculture and fishery through rural development can significantly contribute to these goals. However, contrary to the general assumption that any growth-oriented investment in the agricultural sector effectively reduces poverty, experience has shown that untargeted investment to increase agricultural production is relatively ineffective in reaching the poor. The principles behind the effective implementation of a program/projects lays in the shoulder of the following:

- Agricultural investment must be designed to be proactive, people-centered and socially inclusive from the earliest stages of the programming and project cycle;

- Social analysis strengthens the capacity of agricultural investment to reduce rural poverty and to create socially inclusive, gender-equitable and sustainable development outcomes;

- An interdisciplinary and holistic approach to social analysis is required to appreciate the interface between social issues and the technical, institutional and economic aspects of project design, and to ensure that overall program objectives are sensitive to relevant aspects of the socio-economic and cultural environment;

- Social analysis is a cross-cutting issue which should penetrate all program activities and not be confined solely to the interests of the sociologist;

- The sociologist reflects the priorities of the intended beneficiaries and others in negotiations with government and donors regarding agricultural investments;

- The process of social analysis contributes to building local ownership and mutual understanding of investment program among the financing agency, government and intended beneficiaries, and enhances the capacity of local actors to implement them; and

- Social analysis is applicable at all stages of the programming and project cycle and for all types of agricultural investments.

For this purpose, SAAD has developed general procedures on how social preparation should evolve:

1. **Contact building**. The SAAD Coordinators - Provincial Coordinator (PC), Area Coordinator (AC), or the BFAR Provincial Fisheries Officer (PFO) - must send communication letters and secure consent or approval from the concerned Local Government Units (LGUs) and communities before any operations will take place. The SAAD staff are to brief them about the SAAD Program, its subprojects, and beneficiary eligibility requirements.

2. **Information Campaign**. The SAAD Coordinators will visit the target municipality(ies) and/or barangay(s) to create a community profile where basic information such as geographical information, population, demographic profile, poverty incidence, existing agricultural activities, and, if any, existing farmer associations. Information sources such as the DA-Registry System for Basic Sectors in Agriculture (DA-RSBSA), Office of the Municipal Agriculturist, *Pantawid Pamilyang Pilipino Program* (4Ps) of the

Department of Social Welfare and Development (DSWD), and, if applicable, the National Commission on Indigenous Peoples (NCIP) database, are also reliable references.

3. **Identify the beneficiaries**. In coordination with local officials, the SAAD Coordinators will hold community meetings to introduce the program and its beneficiary eligibility requirements. Qualified partner-farmers will be identified and listed.

4. **Identify projects**. The SAAD Coordinators will provide the prospective beneficiaries the menu of available projects that range from rice, corn, high-value crops, livestock and poultry, industrial crops (i.e. *abaca*), and fisheries (aquaculture and capture) from which the beneficiaries will choose, with respect to the SAAD Implementing Guidelines.

5. **Organization, geotagging and registration**. The SAAD Coordinators will assist the residents in registration to be formally identified as SAAD Program beneficiaries. They will also be assisted for registration in the RSBSA.

6. **Training of beneficiaries**. With the beneficiaries being formally part of the SAAD Program, the SAAD staff will help train beneficiaries in agriculture and fishery production and enterprise development.

With these procedures in place, the program hopes to further strengthen its social preparation practices down to the barangay level and ensure that each beneficiary, whether individual or group, are well-prepared to receive livelihood projects.



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