Extension Delivery System: The Philippine Bureau of Agricultural Extension

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For the Philippine Bureau of Agricultural Extension, accelerating technology transfer in small farm agriculture can be achieved through organized extension service system, coordinated service receiving client system, responsive service delivery and reasonably-funded extension delivery system from a bottom-top process consultation.

The agricultural system should recognize the most appropriate production mix that will give the highest net income which should be farm management and market-oriented based on farm family. Extension service must recognize that human resources or manpower is the most valuable resource of development because it is endowed with inherent power of choice to decide. On the other hand, agricultural extension’s goal is to build and develop community-based organizations that are self-reliant so as to develop their own community resources management system.

Key words: Production mix, extension, extension delivery system, technology transfer

INTRODUCTION

The growth and development of agricultural extension has always been associated with government re-organizations. Briefly, its historical perspective by regime is described hereunder:

Spanish Regime

The beginnings of agricultural extension service date back during the Spanish era when the Spanish missionaries established the “Granjas Modelos” (model farms) which later on became the Settlement Farm Schools. Changes in cropping patterns in answer to market demands created impact in neighboring farms that became prototypes of “haciendas” due to the encomienda system that was later on institutionalized.

American Regime

In 1902, the Americans created the Bureau of Agriculture. A division for Demonstration and Extension Service was established under this Bureau in 1910. Five years later, the activities of this extension division were expanded to include cooperative farmers’ associations, rural credit and animal insurance. In 1929, the Bureau of Plant Industry and the Bureau of Animal Industry were created. The Agricultural Extension Division remained with Bureau of Plant Industry. In 1936, the Commonwealth Government enacted Commonwealth Act No. 85 which created the provincial agricultural extension service. This Act provided for the appointment of Provincial Agricultural Extension Supervisors and Municipal Agricultural Inspectors.

Philippine Republic

In 1952, Republic Act No. 680 created the Bureau of Agricultural Extension (BAEx) which integrated the agricultural extension service of the then Department of Agriculture and Natural Resources. Upon recommendation of the Bell Mission in 1953, BAEx was given the mandate of implementing an agricultural extension program designed for farm management, home management and rural youth development.

In 1963, upon enactment of Republic Act No. 3844 otherwise known as the Land Reform Code, BAEx was made into the Commission on Agricultural Productivity and placed under the Office of the President. The promotion and development of Agricultural Cooperatives was intensified while the programs, projects and activities of the Commission were realigned to support the agricultural land reform program.

In 1967, Republic Act No. 5185 otherwise known as the Decentralization Act, empowered the local government to undertake agricultural extension services. About 16 other government agencies were found doing agricultural extension service in view of the increased demand for such services brought about by the small-scale farming system in the land reform areas and the series of re-organizations.

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In 1968, Executive Order No. 128 implementing the Decentralization Act of 1967 rationalized the implementation of the Agricultural Extension Service.

Martial Law Regime

In 1972, the Integrated Reorganization Plan mandated by Presidential Decree No. 1 reverted the Commission on Agricultural Productivity to its original name—Bureau of Agricultural Extension, back to the DANR.

Gradually regional offices were established by the line bureaus and Regional Directors were appointed. In 1974, Letter of Instruction Nos. 447 and 448 authorized the Ministers to delegate substantial powers/responsibilities to the Regional Directors. The Ministry of Agriculture was among the first to delegate such powers and responsibilities to the Ministry of Agriculture Regional Directors.

In 1978, Presidential Decree No. 1579 was issued to reorganize the Ministry of Agriculture. This P.D. converted the former line bureaus: Bureau of Soils (BS), Bureau of Animal Industry (BAI), Bureau of Plant Industry (BPI), and Bureau of Agricultural Extension (BAEx) into staff bureaus while at the regional, provincial and municipal levels ministry-wide regional, provincial, and municipal offices were created. Regional Directors with two (2) Assistant Regional Directors per region were appointed by the President. Seventy-five (75) Provincial Agricultural Officers were designated in 75 provinces; sixty (60) City Agricultural Officers and 1,558 Municipal Agricultural Officers corresponding to the cities and municipalities were also designated.

In May 1980, Executive Order No. 595 transferred the Bureau of Cooperatives Development (BCOD) from the Ministry of Local Government and Community Development (MLGCD) to the Ministry of Agriculture. This mandated the Ministry to strengthen community-based organizations for agricultural cooperation toward programs on savings and reinvestments to complement income-generating projects. Agricultural extension service was called upon to transfer appropriate technology for farming systems; accelerate institutional development as well as massive efforts on human resource development.

Post-Martial Law Regime

On June 30, 1984, Executive Order No. 967 renamed the Ministry of Agriculture into the Ministry of Agriculture and Food and transferred the Bureau of Fisheries and Aquatic Resources (BFAR) from the Ministry of Natural Resources (MNR) to MAF. Accordingly, MAF was made responsible for the formulation of policies and goals for promoting the production of agricultural crops, livestock, poultry and fish through the implementation of appropriate programs and projects and the provision of suitable services for administration, research, regulatory and extension.

Revolutionary Government under a Freedom Constitution

The staffing pattern as envisioned is not yet in place. There is, however, a re-alignment of services under five (5) Assistant Ministers and four (4) Deputy Ministers. The short-term recovery plan for the rural sector has been presented and approved and disseminated while the agenda for action in agriculture has been drafted.

Problems and Issues in Agricultural Extension: Their Resolutions

The Philosophy of Agricultural Extension Service

For a long time now, there has been a search for a brief definition of the philosophy of agricultural extension. A long list of principles and concepts are always enumerated. To the client system of extension these are quite difficult to appreciate, understand and remember. The brief definition is the synthesis of the principles and concepts.

Agricultural extension service is a continuing nonformal education designed mainly for farm families and landless farm laborers interested in developing farming systems of the best production mix calculated to increase sustainable productivity and net income with the end in view of attaining quality nutrition and generate savings for reinvestments into complementary income generating projects.

This educative mandate proceeds from a bottom-up process consultation with community-based organizations. It is farm management oriented and uses to advantage the applied communication process to determine the best production mix that will give the highest possible sustainable productivity and net income from the farm.

The Mandate of Agricultural Extension Service

As gleaned from its defined philosophy, agricultural extension service is tasked to be the educational arm of the Ministry of Agriculture and Food. To carry out this mandate effectively, it is necessary that coordination and linkages must be effected with other agencies, government and non-government.

Primarily these linkages are with Philippine Council for Agriculture Resource Research Development (PCARRD), Training Executive Committee (TEC) of the Central Training Unit (CTU) of the Ministry, PTC-RD and other research and extension agencies at the national level.

At the regional and provincial levels, linkages and coordination is done with the Agriculture Sector (RDC), PDC, and MDC of the local government units, the farm community-based organizations, the State Colleges and Universities of Agriculture, NGO's and other government and private research and extension agencies.

The strategy to undertake a cost-effective human resource development program, however, is using the applied communication approach whereby the farm family through process consultation is led to come to a decision on what production mix it decides to have in its farming system. After making the decision, it must be ensured that such a decision should be carried to a successful conclusion.
This can only happen if project messages for all commodities in the production mix are developed, packaged and pre-tested with the farm family/farm community and the extension technologists, up to a point when they are satisfied with the efficacy of the messages.

After these project messages are pre-tested to determine their validity and the language/dialect in which they will be printed, these will be mass-produced for that locality where it will be used. This in turn will be the identified area development isolate, having the same soil types and agro-climatic and ecological conditions.

This applied communication output (project messages) will be used by the farm families, the technicians, the farm owners and the trainors in their training of technicians, farmers, homemakers, rural youth, landless farm laborers and other farm hands.

MAF (BAEs) and PCARRD have developed this applied communication strategy with the regions and provinces using the identified area development isolates as the target unit in coastal, lowland, rainfed, upland and hillside areas categorized as to soil types and agro-physical and ecological conditions.

Strategies and Approaches

The philosophy and the mandate of agricultural extension service call for effective strategies and approaches.

1. The Farming Systems Approach

The farming system approach looks at the total farming system (production) including the off-farm employment and income. It is a search for the best production mix in the short term (cropping season) and in the long term taking into consideration the controllable factors of production in farm management and the less-controllable factors such as soil types and agro-physical (climate, weather, ecology) conditions.

This approach uses to advantage community-based agricultural cooperation and is anchored toward the development of community resources management systems for self-reliance.

2. Human Resources Development

The development of community resources management system for self-reliance is delimited by the relevant knowledge, appropriate skills and desirable attitude towards work of both the client system (farm families) and the extension technologists. Their continuing education and training will increase and update their capabilities to integrate usable technologies necessary in the improvement and sustenance of productivity and net income in the production mix.

3. Institutional Development

The requirements of agricultural extension service in the 7,100 islands composed of 75 provinces, 60 cities, 1,558 municipalities, and more than 42,000 barangays are quite enormous and expensive. Agricultural extension service therefore should use to advantage organized service delivery to organized groups of farmers, homemakers, rural youth, landless farm laborers as institutionalized under the Training and Visit System.

The organization, training and development of community-based organizations through participative planning, programming, budgeting, implementation, monitoring and evaluation synergistically complement the development of community resources management system for self-reliance.

Institutional development connotes organization for growth and development, coordination for unity of purpose and cooperation; credibility for commitment, innovation for progress, and flexibility for better human relations.

4. Linkages and Agency Service Complementation

There is only one Philippine Government, one Agriculture Sector and Ministry of Agriculture and Food. All the salary/wages of government personnel are paid with the same Philippine peso from the same Philippine Treasury. All these are paid by the same Filipino taxpayers and others doing business in the Philippines. This is the most valid reason why there must be agency service complementation.

However, in order to have realistic and meaningful linkage and/or agency service complementation, there must be understanding and agreement on shared responsibilities, resources and commitments. This sharing must necessarily be based on agency mandate to ensure commitment of personnel and resources. Mutual respect should also be considered to make the service complementation lasting.

Agricultural extension service establishes and maintain linkages with research and other sectors in the development efforts. These are:

a) Agriculture Sector

MAF bureaus and attached agencies, MAR, MNR, infrastructure agencies (MPWH, NIA, FSDC), SCU's, PCARRD, UPLB, IRRI, RIARIDS and NGO's. This is the sector acting as the service delivery mechanism.

b) Local Government Units/Councils

These are the RDC, PDC, MDC, and BDC that serve as the service delivery channels at different levels. They must be responsive and supportive of development efforts.

c) The Client System

These are the organized receiving mechanism represented by farm families composing the community-based organizations (farmers, homemakers, rural youth, landless farm laborers). They should be involved in participative planning, programming, implementation, evaluation
and monitoring of research and extension programs and projects.

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\begin{array}{ccc}
\text{Agriculture Sector} & \leftrightarrow & \text{Local Gov't Units/Councils} \leftrightarrow \text{Farm Families Community-Based Organizations} \\
\text{Service} & \leftrightarrow & \text{Service} & \leftrightarrow & \text{Receiving} & \text{Mechanism} & \text{Client System} \\
\text{Delivery} & \leftrightarrow & \text{Delivery} & \leftrightarrow & \text{Mechanism} \\
\text{Mechanism} & \leftrightarrow & \text{Channels} & \leftrightarrow & \text{Client System}
\end{array}
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\(d\) The Agri-Support System

This includes the training, marketing and financing institutions and the input dealers, output traders, post-harvest handlers, and processors servicing the farming sector.

\(e\) Other linkages in the social services sector with regards to nutrition, population education and primary health care are also established and maintained. Intersectoral linkage with industry is necessary for the success of agri-based income-generating projects.

Some Queries on Agricultural Extension Elicited by This Workshop

Are today's extension delivery methods the most effective means of transferring technologies to farmers?

The Ministry of Agriculture and Food is under reorganization. Extension service has been integrated at the regional, provincial and municipal levels. Where before this was commodity oriented, it is now undergoing a transition to focus on the total farm system. The cost-effective way to do this is through the continuing search for the best production mix which considers the factors of production the farm management way and as influenced by market forces. After determining the best production mix the other consideration is to ensure that this decision is carried to a successful conclusion with the packaging of project messages for each commodity in the production mix to serve as instructional materials for both the farmer and the technician.

Much has still to be done in this approach which has been proven effective for specific area development isolates in coastal, lowland, rainfed, upland and hillside areas with identified soil types and agro-physical and ecological conditions.

Are today's delivery mechanisms the most useful means when farmers have low education and income?

The present delivery mechanisms are being worked out with the agricultural sector as the service delivery system, the local government units as the delivery channel and the farmers as the receiving client system. Under this approach the project messages are field-tested with the average farmers to validate their efficacy as to understandability and language/dialect to which these messages will be written. Presently, these instructional materials are being evaluated nationwide in coordination with the agricultural sector, the farmers, the research and extension agencies (PCARRD, MAF-BAEx, Regional Applied Communication Office of the research centers/consortia of the PCARRD network, SCU's and NGO's).

This inter-agency complementation has still a long way to go to cover all the farmers in the different development zones already mentioned.

How should R and D and extension delivery be interfaced to improve efficiency of extension?

1. Both research and extension should be location-specific. Therefore, on-farm trials should be designed jointly by the applied researcher, the SMS and the extension technologist. These trials should be set-up in all regions of the country covering all agro-ecological zones of different soil types.

2. Demonstration trials (component/production system) should be conducted by extension workers with technical back staffing from off-farm and researchers.

3. Researchers should help SMS to conduct training of extension workers and farmers as usable technologies are identified.

4. Researchers, extension workers and farmers shall actively participate in joint planning and review of provincial and regional programs; conduct workshops and meetings to discuss common issues.

5. Provide continuous training of researchers and extension workers on management of research and extension.

6. Researchers should be encouraged to get more exposures to actual field conditions by attending monitoring tours, farmers field days, meetings and barangay immersion.

7. Extension workers and PTVT's should be trained on the technical and methodological aspects of on-farm trials, demonstrations and production programs.

8. In the research and extension linkage continuum, the interface should provide maximum forward and backward feedback.

What are the most important problems facing technology transfer in Philippine agriculture?

1. The service delivery mechanism is still fragmented. It must be organized and coordinated to deliver common messages to the client system. This will make the delivery system effective and credible rather than confusing to the receiving client system.

2. The delivery channel (local government units/councils) should be responsive and supportive rather than perceived to be difficult to work with, it being a political authority.

3. The receiving client system should be organized and coordinated rather than disorganized having too many proliferated organizations.
4. The capability of extension workers to integrate usable technologies for the total farm system should be attained through continuous training on farming systems approach. Subject Matter Specialists need to backstaff the generalist technicians through the Training and Visit System.

5. The low educational level of farmers have to be matched with simple, understandable project messages printed in the local dialect. More methods and results demonstrations have to be undertaken in farmers fields where BNEX specialists, planners, trainors and communicators are deployed by regions to link with their regional and provincial counterparts for these tasks.

**How can we render today's extension delivery system more responsive to the needs of small farmers?**

1. The extension delivery system should be planned with farmers using the bottom-up process starting with situation analysis, problem identification, solutions and alternative solutions identification preparing the work program, allocation of resources and scheduling of activities.

2. As stated before in this paper, it must be farm family/community-focused and arising from felt needs and considering family/community values.

3. The resource requirements must be cost-effective, available and with optimum returns on investments.

4. The delivery system must allow opportunities for socio-cultural growth and must be oriented towards the development of community resources management systems for self-reliance, exercise of power and decision-making of the family/community.

**Could we expand delivery capability given existing fund limitations?**

1. The extension service delivery capability could hardly be expanded under existing fund limitations.

2. The cost-effective strategies and approaches using the farming systems approach, human resources development, institutional development, linkages and inter-agency service complementation will require more financial resources than what is now available. This is so because current expenditures indicates that only about 0.22 and 0.11% of gross value added is spent for research and extension, respectively, as against the normal requirement of 1 to 1.5%.

3. Decidedly, however, these cost-effective strategies and approaches will increase the extension service delivery capability significantly.

**Concluding Statements**

Accelerating technology transfer in small farm agriculture is dependent on:

1. An organized, coordinated and credible extension service delivery system;

2. An equally organized, coordinated and credible service receiving client system;

3. A responsive and supportive service delivery channel;

4. Reasonably funded decentralized extension service delivery system which proceeds from a bottom-up process consultation.

The extension service delivery system must consider that:

1. The system should utilize strategies, approaches and methods of implementation which are simple, easy to understand, cost-effective, participatively formulated through planning and budgeting and done from the lowest implementation level.

2. The consultative democratic process should be practiced in the identification, planning, implementation and monitoring/evaluation of programs, projects and activities (PPA). The people involved and affected by such PPA's should be organized for the consultation process with the local government Sanggunians. This is in consonance with and mandated by the Local Government Code and Executive Order No. 803.

3. The agricultural extension system should recognize that the search for the most appropriate production mix that will give the highest possible net income is a continuing dynamic process which should be farm management and market oriented, based on farm family/community values and heavily influenced by factors such as input and output marketing, price policies, cost of credit, and policy interventions by organized/syndicated groups and the government.

4. Extension service must recognize that the human resource is the most valuable resource of development because it is endowed with inherent power of choice to decide. Its capability has to be developed to its optimum potential to become the army of citizen-workers with relevant knowledge, appropriate skills and desirable attitude. It must know not only its rights and privileges but more importantly its duties and obligations.

5. The establishment of linkages should be truly based on mutual respect/benefit, within its operational mandate of complementing agencies to arm it with legal bases for coordination, collaboration and commitment.

6. Research-extension linkage must be institutionalized in a continuum where research is generated, verified, packaged appropriately into usable technology while extension integrates and diffuses or transfers it to the end-users. It also provides feedback on technology use, research and policy directions.

7. The ultimate goal of agricultural extension is to build and develop community-based organizations (CBO's) that are self-reliant, self-propelling and self-actualizing so that such CBO's will be able to develop their own community resources management system.