



**NATIONAL OPEN UNIVERSITY OF NIGERIA
FACULTY OF AGRICULTURAL SCIENCES**

**DEPARTMENT OF
AGRICULTURAL ECONOMICS AND EXTENSION**

FPY/SIWES PRACTICAL GUIDE MANUAL

**ARD403:
EXTENSION STRATEGIES IN PILOT RURAL DEVELOPMENT
PROJECTS**

Course Developer/Writer

Prof. N. E. MUNDI



National Open University of Nigeria

Plot 91, Cadastral Zone, University Village

Nnamdi Azikiwe Expressway

Jabi, Abuja

Lagos Liaison Office

14/16 Ahmadu Bello Way

Victoria Island, Lagos

e-mail: centralinfo@nou.edu.ng

Website: www.nou.edu.ng



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CONCEPT OF EXTENSION STRATEGIES IN PILOT RURAL DEVELOPMENT PROJECT

1.0 INTRODUCTION

ARD 403: Extension Strategies in Pilot Rural Development is the field based laboratory for the students of Agricultural Extension and Rural Development, which enhanced testing of extension principles and philosophies among rural farmers; teaching of students about rural living; collection and establishment processes of the rural dwellers.

Pilot project on rural development is usually a social laboratory designed to integrate agricultural research, education and extension as a viable step towards effecting a rapid and lasting impact on such communities. It is set up to enhance rural development by using the concept of regional or area planning. The rural pilot project approach is hinged on the assumption that better results can be achieved by taking a project approach in a particular location during a specific time period with large infusion of outside resources. Ample level of facilities is provided to staff including availability of foreign advisers. Success is measured through achievement of short run changes (Singh 2010).

Rural development activities are usually organized and implemented under the general area of agriculture, health, women programmes in home economics and youth development. In the area of agricultural activities, farmers are encouraged through their farms to incorporate improved cropping patterns, they are also organized into groups and hold monthly planning meetings which in turn serves as an avenue for extension teaching of contact farmers. Health facilities by the supervisory staff from established government hospitals or non-governmental agencies. Emphasis is usually laid on preventive and curative medicine noting that health is wealth and there is a strong relationship between health and productivity. The health personnel usually incorporated into their programmes: immunization, environmental sanitation, material and child care education.

Women activities centre upon areas of home economics and child care, processing and preservation of crop and livestock products, food preparation and home management. Follow up are carried out to check whether the acquired skills are well used. Recognizing the importance of youth as rural adults of tomorrow, the rural development programmes usually pay attention to them by providing training for them in the areas of health and agricultural activities.

2.0 OBJECTIVES

By the end of this lesson, you should be able to:

- Identify and appreciate the steps for achieving the objectives of pilot project.
- Give at least two examples of rural development pilot project to the students as a case study.

3.0 PROCEDURE FOR ACHIEVING PILOT PROJECT OBJECTIVES

3.1 Steps for Achieving the Objectives of Pilot Project

The following are procedural steps for achieving the objectives of pilot project:

- Selection of a project area in accordance with some predetermined criteria.
- Benchmark survey and situation analysis.
- Formulation of a development programme and determination of specific activities with village representatives through a process of dialogue and reflection.
- Implementation of the programme by villagers themselves and their local organizations.

The above procedure is in line with extension principles and tenets which states that extension should start from where people are, assist people to determine their own problems, help them to find desirable solutions to their problems and to encourage them to take action. Extension should be based on the needs and interests of the people which are closely related to improving their livelihood. Extension should provide maximum opportunity for the people to work on the programmes that have been designed by them and others.

Pilot project in rural development was based on the principle of liberating education otherwise known as conscientisation, which involves establishing dialogue among learners that generate analysis of social reality. An objective perception of that reality leads to higher levels of consciousness and eventually transforms limiting structures. The process also leads to attitudinal and behavioural changes. Extension education programme considers that in a rural development process, teaching and learning should be carried out in an atmosphere of mutual trust and respect between the change agents and their clientele. The first meeting with the village farmers occurred in a casual manner as significant number of people start to dialogue about the extension

project. The purpose of the meeting will be highlighted and the difficulty that will be encountered in carrying out the initial investigations of the areas without their cooperation, understanding and trust will be mentioned. At the concept of the leadership, a bench mark survey to obtain agricultural, environmental, social and cultural data on the life of the area will be achieved through dialogue with the people. The situation will be studied and the problems discussed together with a view to developing an agricultural programme based on their existent, reality and needs. This preliminary joint meeting will be followed by a series of planning and programme review meetings on the activities of the extension staff and farmers in the village (Williams et al 1984).

3.2 The Badeku Rural Development Pilot Project

The Badeku pilot rural development programme of the University of Ibadan was initiated in October, 1970 by the then Department of Agricultural Economics and Extension (now two separate departments) to try innovative strategies in education and information delivery for rural development. Badeku, the site of the project is about 17miles from the university in Egbeda local government area of Oyo State. It was a pilot project on rural development; the activities were funded by the Rockefeller Foundation for five year period of (1973 - 1978) and the University of Ibadan Senate Research Grant in 1982.

The objectives of the project are to:

- Create an innovative work and research area for students and staff of the faculty.
- Promote local initiative, self reliance, confidence and implementation of activities for their own development.
- Provide a basis for linkage between the rural population and several agencies working for them.
- Establish a real life laboratory type situation in which staff and students of the faculty and university can learn and participate in agriculture and rural development.

The plan of action for achieving the above objectives included:

- Selection of a project area in accordance with some predetermined criteria.
- Through benchmark survey and situation analysis.
- Formulation of a development programme and determination of specific activities with village representatives through a process of dialogue and reflection.

- Implementation of the programme by villagers themselves, local organizations and other government agencies with the project playing a facilitator and a catalytic role.

The above procedure was employed by University of Ibadan on her Badeku project and 36 villages participated actively in the project. Each village was assisted to conform and practice the dialogical process in the identification of problems and determination of solutions. Voluntary groups were democratically organised based on trust and commitment. They met regularly to re-evaluate progress and make future plans.

The Badeku project was reported to have better the lives of the farmers in the participating villages as they have increase in yields and incomes due to adoption of improved practices and access to factors of production.

3.3 The Isoya Rural Development Project

The project was set up as a model for rural development in some selected villages in Ife division where University of Ife now Obafemi Awolowo University is located. This pilot project (Isoya) was directed at improving the socio-economic conditions of the people in the selected villages. Eleven (11) villages participated in the project and they were selected based on their willingness to cooperate, relative smallness of population and accessibility to university campus. Two villages withdrew before committing their resources into the project as they wanted to see tangible evidence that would benefit them. The nine villages that participated in the project are Erefe, Aroko, Iyanfoworogi, Ladin, Akeredolu, Isoya, Olorunbo, Esera and Walode and the project was located about 15miles north of the university campus. At the inception of the programme only five of the village have primary schools, there were no health facilities, health officers, and farming is the major occupation of the people.

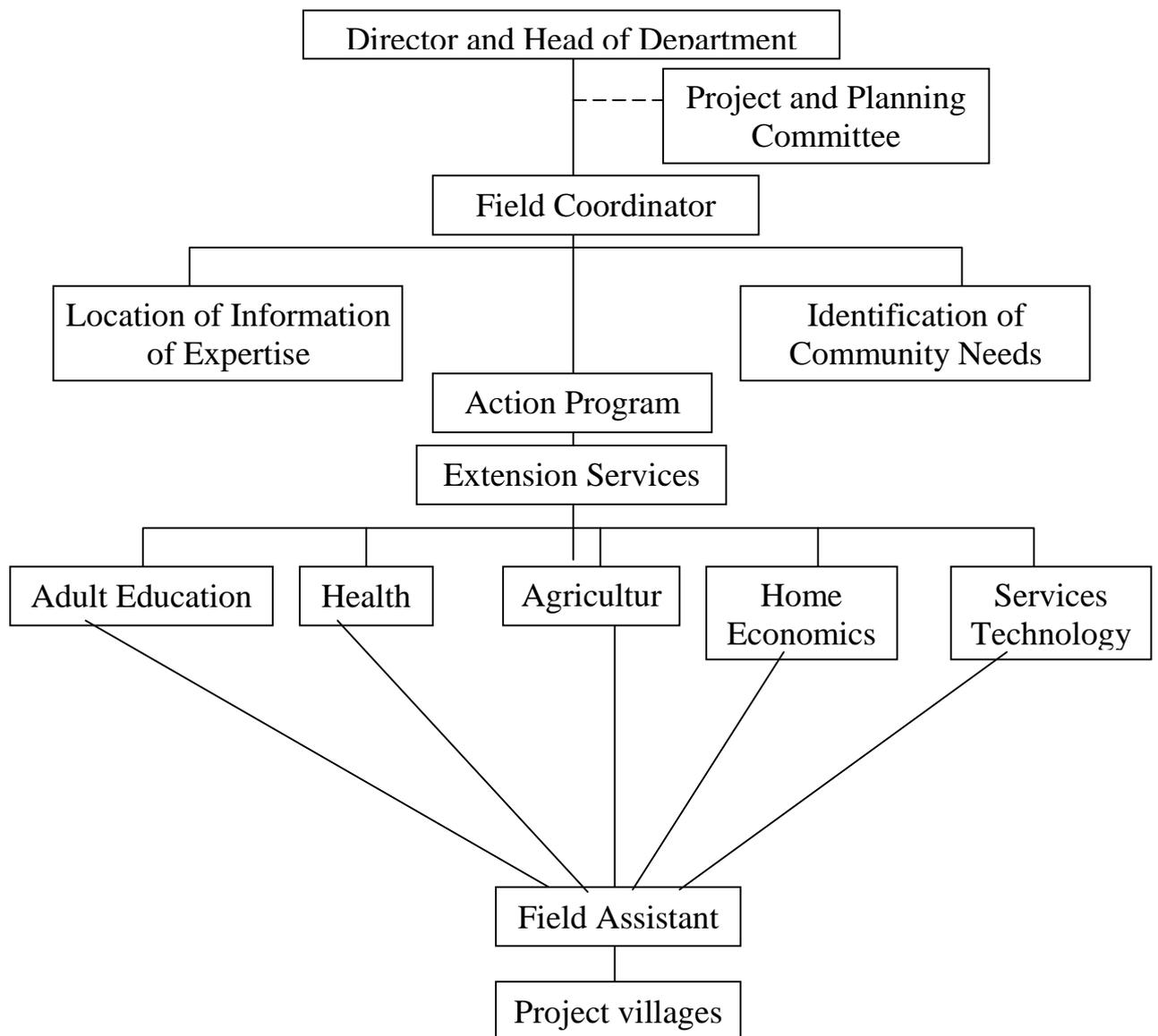


Figure 1: Organizational Structure of Isoya Project

The head of the department of agricultural extension and rural sociology of Obafemi Awolowo University is the director of the project and is responsible to the university for all its activities. He establishes liaison with the aid granting agency, assisting him is the project planning committee which comprises of all members of staff in the department.

The committee under his chairmanship is responsible for the planning, execution and evaluation of the project and it must approve all research activities connected with the project. The planners' have firm control over all activities going on in the villages, other interested department in the faculty of agriculture and elsewhere in the university are co-opted to work with the planning committee as necessary (Williams 1985).

At field level, it is head by a coordinator who directed the execution of the planned action programmes and relaying field problems to the director and the planning committee. Under the coordinator are two posts: an agricultural technician and an agricultural assistant, there is also a home economics with field assistant who is responsible for planning all programmes related to women.

Strategy

Once the objectives were clearly stated, a programme of planned action was developed in cooperation with the people involved. The strategy was to foster closer relationship with other agencies or institution in creating essentials and accelerators of change that were lacking such as improved planting materials, adequate supply of farm inputs, information sourcing on credit and effective communication on improved technological information.

Planned Action Programme

In planning the action programme, the project coordinator was saddled with the responsibilities of directing the activities by preparing operational plans, executing them, summarising and reporting results. He gains the supports of other agencies and interested department by keeping them informed on the activities of the project, its achievements as well as constraints.

Action programme were initiated in areas of agriculture, intermediate technology program, Home economics and cooperative studies and the following results were obtained.

1. Efficient technologies for producing maize and cowpea resulting in an increase of about 200% on the average yield of maize.
2. Development of a simple low-cost dryer to improve the marketing of maize at the time when prices are most favourable.
3. Formation of cooperative societies to handle the marketing of the maize and to channel credits and loans for agricultural activities.
4. Introduction of adult literacy programmes.
5. Improvement in child nutrition, resulting in reduction of infant mortality, and the awareness among the women of the need to seek medical attention for themselves and their children.
6. Development of audio visual aids for teaching improved technological practices and for functional literacy programmes.
7. Development of formidable group capable of accepting responsibility.
8. The launching of the monthly Isoya newsletter an alternative means of carrying information to the villages and of giving the residents an opportunity to express themselves.

4.0 CONCLUSION

The unit examined the concepts of extension strategies and pilot projects in rural development starting the objectives and steps for its achievement; using Badeku and Isoya rural development projects of university of Ibadan and Obafemi Awolowo University, Ile-Ife respectively as examples.

Rural areas are very significant to stability of the nation as it serves as a place where foods are being produced. There is need to develop rural areas to enhance food security and narrow down the income distribution between rural and urban dwellers. Rural projects in rural development are usually set up to integrate agricultural research, education and extension to the rural communities in order to improve their income and standard of living.

5.0 PRACTICAL ASSIGNMENT

1. As an extension agent in rural area how do you formulate a development programme with village representatives through a process of dialogue or discussion?
2. What are pilot projects in rural development?
3. Describe any rural development pilot project you know apart from the Badeku and Isoya rural development projects learnt as case study.

6.0 REFERENCES

- Singh, K. (2010). Rural Development Principles, Policies and Management: 20–21.
- Williams, S. K. T. (1985). Rural Development in Nigeria. Ife: University of Ife Press: 23 – 39.
- Williams, S. K. T., Fenley, J. M. & William C. E. (1984). *A Manual for Agricultural Extension Workers in Nigeria*. Ibadan: Les Shyraden Publishers: 16 – 18.

STRATEGIES FOR RURAL DEVELOPMENT

1.0 INTRODUCTION

In rural development process, various strategies are being used to achieve the desired outcome. These strategies are referred to as systematic, comprehensive and reliable tool aimed at bringing about desirable rural transformation.

2.0 OBJECTIVES

By the end of this practical unit, the students should be able to:

- Describe the strategy in rural development
- Describe agricultural extension strategy
- Be involved and exposed to approaches of community development strategy
- Appreciate the concept of integrated rural development

3.0 PROCEDURAL STRATEGIES FOR RURAL DEVELOPMENT

3.1 Concept of Strategies In Rural Development

Rural development strategy is referred to a systematic, comprehensive and reliable tool aimed at bringing about desirable rural transformation.

A strategy for rural development is expected to produce results, hence it has been tested and found effective under certain circumstances and can be replicated under similar circumstances in another setting. Strategy is a campaign plan indicating the main lines of action to be adopted in pursuit of a given set of objectives. Development means a process of self-determination and can only be what the people themselves consider it to be. The people whose development is at stake must decide what the specific content, objectives and means of attaining the objective should be. Development must also be democratic because it is under this condition that people can freely express themselves. Rural development in a contemporary context of deliberate policy action is essentially a transition of a rural society from an existing state to a desired state. Therefore, the strategies employed in bringing the development of rural areas into reality are strategy of rural development.

3.2 Agricultural Extension Strategy

Agricultural extension strategy was based on the premise that the cheapest materials in the rural areas are land which the resources can be developed via effective agriculture extension services. This strategy aims at increasing

agricultural productivity and welfare of rural farmers. It helps farmers to increase their productivity by persuading them to adopt improved technical practices.

Agricultural extension as a strategy to rural development helps to improving the farmers productivity and changing the outlook of farmers towards their problems while its shortcoming as a strategy lies in its ineffectiveness in promoting agricultural development. The main reasons for this are:

- Low ratio of extension agents to farmers who are to teach the farmers improved farm practices
- Inadequate credit facilities to purchase farm inputs
- Inadequate use of local leaders to assist extension agents in teaching farmers
- Inadequate motivation of extension workers
- Inadequate funding of extension services by the government.

3.3 Community Development Strategy

Community development is a social process by which people become more competent to control local aspects of economic and social change. It can be defined as a conscious and deliberate effort aimed at helping communities recognise their needs and to assume increasing responsibilities for solving their problems thereby increasing their capacities to participate fully in the life of the nation.

- Community development emphasizes self-help by citizens and also initiates a people directed process that is based upon their own perception of their needs.
- It uses the principles of initiative felt needs, self-help and citizen participation.

Steps in Community Development

Community development process usually follows the following procedures:

- Informed survey, fact finding and identification of community concerns
- Identification of a small group of leaders or interest group who can serve as the initiating sets
- Identification of immediate community problems sharing of the problems identified with community leaders for legitimation
- Diffusion of problems and definition of needs

- Security citizen's commitment to act and identification of needed resources
- Approach of available internal resources and invitation of external aid where necessary
- Formulation of detailed plan
- Implementation of the action and evaluating
- Identification of problems arising, finding solution to it and planning for the continuation of the process.

The problems with using community development strategy are:

1. It is not easy for one person to be effectively trained in all sectors of rural development; hence community development agent may be ineffective
2. There is often no formal coordination between the agencies working at the local hence the change agent has no power to enforce cooperation by other development agencies.

3.4 Integrated Rural Development

This strategy was based on the premise that a combination of factors not only the right technology and education but also access to physical inputs and attractive markets will get agriculture moving. Integrated rural development is multipurpose in nature because it entails interconnectivity of programme on education, health, agriculture, nutrition, cooperatives and the like and no one is treated in isolation but together. The strategy contends that the key to improving the productivity of small scale farmers and the promotion of more effective government support is a package of reinforcing activities. These activities include the provision of farm credit, extension agricultural inputs, reliable marketing facilities, assured agricultural product prices, rural public works and stronger village institution. It became popular in the 70s because of the realisation that rapid economic growth does not guarantee availability or equitable access to social services and amenities.

4.0 CONCLUSION

This unit focuses on the coordination and strategies used in rural development project in Nigeria. The key strategies include community development, agricultural extension and integrated rural development strategy. Agricultural extension strategy should aim at improving the productivity of farmers and their farm families utilizing individual, group and mass methods while integrated rural development utilises various disciplines in the planning and execution of its projects.

5.0 PRACTICAL ASSIGNMENT

1. Briefly explain agricultural extension strategy of rural development and state the reasons why it has failed in some areas.
2. Why is integrated rural development strategy commonly used for some of rural development projects in Nigeria?

TRAINING OF BENEFICIARY, PARTICIPATING AGENTS AND EXTENSION STAFF OF GOVERNMENT AND NON-GOVERNMENT ORGANISATION

1.0 INTRODUCTION

The organisation and management performance of any project on rural development depends to a large extent, on the tasks it has to perform and the environment in which it operates (Anyanwu 2003). As the environment is changing rapidly, the tasks of environment organisation also have to change, therefore the need to organise training for the extension staff and the local people who are the recipients.

2.0 OBJECTIVES

At the end of this lesson, the students should be able to:

- Explain the term training
- Discuss training in relation to staff development
- Identify and explain the need for training of local people or the beneficiary.

3.0 PROCEDURE

3.1 Definition of the term Training

- Training is the process of applying appropriate educational methodology to those situations in which improved performance can be achieved through effective learning.
- Training can be referred to as the acquisition of the art of using knowledge and skills, it involves a kind of sausage.
- Training enables the agencies, organisation and communities to achieve their objectives.

3.2 Characteristics of Training

The essential characteristics of training are:

- a. **Participatory:-** every trainer is a trainee and vice-versa.
- b. **On-going:-** the training is conceived as a continuous process and it is designed and carried out within the context of any project action to improve the production, income and social condition of the beneficiaries.

- c. **Pragmatic and problem solving:** the training is based on solving immediate and recognised problems.
- d. **Types of training:** in-service, on the job, on site training and learning by doing through self or group.
- e. **Reality exposure:** the trainers and the trainees are to be exposed to the realities of the rural people and their environment.
- f. **Cooperation:** it promotes dialogue and promotion on equal terms between staff and the beneficiaries.

3.3 Training of Local People or the Beneficiary

- a. Certain general subject matters which aim at enhancing beneficiary participation through efficient group formation and action should be given to the beneficiaries. The training areas must include group dynamics, shared leadership, planning of group activities, savings and credit, accounting, cooperative management, marketing, production, storage, processing, monitoring and evaluation as well as negotiating and bargaining.
- b. Specialised training should be should given according to the type of on-going rural development project and individual felt need of the groups or community. In rural areas, training should be given on agriculture and nonfarm activities. On agriculture, training can be on crop production, fishery, forestry, soil and water conservation and marketing, farm management and the likes while training on nonfarm activities include processing, weaving, tailoring, pottery, production of fishing and building materials, barbing and so on.
- c. Training could also be given in areas of home economics, health and community development. For example, good nutrition, first aid, children, material mortality management, leadership and village development. Functional literacy classes can be organised for rural adult, men and women to enable them analyse their problems, plan actions and also to reduce their dependency upon literate villagers or group members.
- d. The opportunities that can be obtained from training by local people include: provision of advice and consultation between group member, promoters and technical officers. Information is given on a subject by a specialist or by a knowledgeable and experienced farmer. It exposes them to many varieties of media such as audio visual aids, radio, films, slideshows, and projector. Demonstrations are organised jointly with group members and written extension materials such as newsletter that are given during training can be used for future references. Training equally facilitates inter-group exchange visits and enhances increased productivity.

3.4 Training of Participation (Group Promoters) Project Staff and Project Coordinator

The training of participatory agents is crucial to the successful implementation of the programme of rural development. It aims at introducing the field workers to the approaches and procedures of rural development. It helps in developing favourite's attributes, motivations and team spirit. It enables them to experiment. They are also taught the basic technical topics which are needed for group guidance such as group dynamics and participatory development and how to develop themselves on the training contents, methods and materials.

The group promoters must undergo management training consisting of project planning, methods of production, planning and implementation, transfer of appropriate technology, marketing, communication techniques, leadership, team building, record keeping and report writing. The coordinator needs to be trained as early as possible by the implementing agency in all the above listed areas and in any other fields related to the job.

At the inception, training workshop should be organised for group promoters and other project staff. Training must be given for at least three weeks in the area or very near the project area with not more than 30 participants, this is to familiarise them with the terrain and what they are expected to do. The group promoters after their first training should be given about 2-3 month to carry out field action on the project area. They will learn about team work, carry out household surveys and how to solve problems met on the field. (van den Ban and Honwkins 1997).

After this is the follow up training of participation agents and it includes the followings:

- Periodic monthly review and evaluation meetings for group promoters and other staff to evaluate their performance, identify and solve work problems and prepare work plans
- Field action workshop
- Refresher courses in such subject like new rural development policies and programmes on innovative income generating activities and credit schemes
- Issue of periodic project newsletter
- Exchange visits of group promoters and officials of their own and officials of their own and similar participatory project

Why Do We Need To Train Staff?

The staffs are to be trained because of the following reason:

- Proper execution of the project
- Effective management of the resources available for the project
- Get them well conversant with the principle and methodology of implementing the project
- Create avenue for easy monitoring and evaluation of the project.

The Areas of Training

The areas of training of the staff depend on the nature, design, scope and other characteristics of the project itself.

It generally includes the following:

- The design
- The mobilisation and sensitisation
- Implementation
- Co-ordination, sharing of responsibilities, recording of each activities etc.
- Monitoring
- Maintenance of the project
- Group formation and maintenance of the ensure sustainability of the project.

How the training should be carried out

- a. The training should be carried out in accordance to the design and scope of the project.
- b. The training should also be carried out at different levels based on level of participation and scope of the responsibility given. There should be identification of different levels of staff and categories of participants, level of agents that will be required for effective, adequate and impactful training.
- c. The training may be carried out through the use of group of mass method. This may include the use of some printed materials, PowerPoint presentation, flip charts calendars, etc. The type of the training will also depend on the literacy level of the participants.
- d. There should be provision of a training guide/manual for easy understanding for reference purposes.
- e. It must be carried out in a conducive environment with little or no interference. The training must have some little incentives for the participants to serve as motivation in the process.

3.5 Training of Governmental and Non-Governmental Organisations Staff as well Local Leaders

This type of training aims at familiarising those involved in the project with the approaches and procedures of the project, the problems militating against the rural people from having access to extension delivery services, and ways of solving it. Most of the times, the officials and local leaders are de-trained and then re-trained to perform their functions effectively as a change agent for rural development. This is achieved through exchange of experiences, seminar, workshop and symposium. The area of training needs of extension agents in Nigeria whether government or non-government include:

- Technical subject matter related to their field. For instance, agriculture and rural development
- Theory and principles of teaching, methods of imparting information and motivation for people to use it.
- Customs, attitudes and values of rural people
- Research techniques
- Principles and methods of administration and supervision
- History. Procedures, policies and organisation of the agencies providing the extension services
- Programme planning and evaluation
- Means of communication especially of research results
- Special attempts to individuals or group whenever necessary
- National plans for rural development and extension work.

The methods of identifying training needs of extension staff are the job description, organisation and operation analysis and critical incident technique. A job description shows the duties and responsibilities of a given position; organisation analysis indicates where training is to be placed and this studies the entire organisation including its objectives resources and their allocation. Operation analysis deals with what an employee must do to perform a job effectively, it focuses on the tasks while the critical incident techniques is a setof procedures for collecting direct observations of behaviour in order to solve problems and develop psychological principles(FAO2003).

The training opportunities for governmental and non-governmental staff include:

- Organising training courses for group promoters and other project staff
- Participation in field workshops
- Partaking in briefing sessions with the use of promotional materials
- Project coordinating committees
- Programme monitoring and evaluation

- Intra and inter country seminars related to the objectives and issue of the project.

4.0 CONCLUSION

Training of beneficiaries, participation agents, as well as extension staff of governmental and non-governmental agent is essential for the success of any project that is directed towards development and improvement of the objectives of the programme as many problems call for a team approach and appreciate the contributions of others. Training is essential for our extension staff to keep pace with the rest of the world.

5.0 PRACTICAL ASSIGNMENT

- i. As a student of Agricultural Sciences, define the term training with reference to your practical experience and mention four of its objectives.
- ii. Why is it necessary to give training to the beneficiary of a programme?
- iii. Highlight the training need areas of an extension staff of governmental and non-governmental organisation.

6.0 REFERENCES

- F. A. O. (2003). *Participatory Development: Guidelines and Beneficiary Participation in Agricultural and Rural Development*. Rome: FAO, pp. 44 – 46.
- Van den Ban, A. W. & Hawkins, H.S. (1997). *Agricultural Extension, USA*: Blackwell Science Inc., pp. 218 – 245.

EXTENSION STRATEGIES FOR THE TRANSFER OF TECHNOLOGY

1.0 INTRODUCTION

The transfer of technology in agricultural development has general been directed towards increased physical production from farms and reducing costs to farmers (Gittinger 2002). During the decade there have been policy commitments by international and bilateral development agencies to the development of rural poor (World Bank 2005 and AOAP 2004). The origin of this concern for the rural poor stemmed in part from the realization of the traditional transfer technology processes were only benefiting these farmers with superior resources, and widening the “equity gap” (Crouch and Chamala 2001). This unit will confine the discussion to face-to-face extension contact, which (Cernea et al 2003) consider particularly important in subsistence agriculture, where there are large numbers of illiterate farmers.

2.0 OBJECTIVES

At the end of this lesson, the students should be able to:

- Explain the extension strategies based on the Transfer of Technology (TOT) Model
- Describe the extension strategies oriented towards the alleviation of poverty
- Describe Farmer-Centred Extension Strategies with reference to their field practical experience.

3.0 PROCEDURAL APPROACH

3.1 Extension Strategies Based on the Transfer of Technology (TOT) Model

The World Bank has provided loans for over 40 developing countries in Asia, Africa, Europe, Central and South America to adopt the Training and Visit (T & V) extension management system based on the TOT model (Benor *et al* 1984). In this system, the Village Level Extension Workers (VEWs) who served about 1,000 farm families are trained fortnightly in the new technology developed by research scientists based on the TOT model. Contact farmers are selected who are expected to apply the new technology in their own fields, and transfer the knowledge to other farmers. The contact farmers who will be expected to be those with above average resources in order to have the maximum impact on increasing agricultural production (Rolling 1992).

(Cernea *et al* 2003) suggested a strategy of providing better training for VEWs in farm management and the sociology of rural communities in order to improve their efficiency in technology transfer. A similar point has been made by Lamrock (2003) who after twenty years field experience in Papua New Guinea, considered the VEWs should be trained in agricultural technology, production economics, the behavioural sciences and the processes of adult education.

3.2 Extension Strategies Oriented Towards the Alleviation of Poverty

The FAO Small Farmers' Development Project (SFDP), began in the early 1980s is aimed at the resource poor, tenant farmers and the landless and fishermen in the Asian Region.

In December, 1982, there were 3272 small farmers groups in Nepal, Indonesia, Bangladesh and Philippines (FAO, 1993). The strategies to benefit the rural poor include:

1. The generation of a receiving/utilizing system of multifunctional groups below the level of existing rural institutions in order to obtain a share of the government inputs for poorer families for development;
2. The formation of small, homogenous trust groups which have common income generating activity and are capable of using joint liability credit; and
3. Group organizers, who are initially, require to catalyse group formation.

The technologies identified by the small farmer groups include: improved ways of grain storage, and grain milling, and cooking with limited fuel (FAO, 1993). The development of extension – research linkages for the development of new technology is not central to this, FAO/SFDP Strategies. However (Garforth 2004) considered that poverty-oriented extension work needs to incorporate the following three elements if it is to be productive:

1. Meaningful two-way communication between research and extension staff and extension staff and the rural poor;
2. A willingness to work with the rural poor to clarify problems and identify solutions; and
3. Flexibility in programme objectives and components.

3.3 Farmer-Centred Extension Strategies

Farmer-centred extension techniques (FCET) have evolved during more than two decades of Australia experience in rain-fed agricultural development in the Asian – Pacific Region (Lamrock 2003, Tully 2001 and Hoare 2004). These

techniques include the three elements identified by Garford and the strategy is now being applied in the implementation of the International Development Association/World Bank funded Highland Agricultural and Social Development Project in a range of irrigated and rain-fed environments in North Thailand.

The steps in the development of technical packages, and the extension process are:

1. The problem census meeting to obtain farmer collaboration in the identification and ranking main agricultural problems of the community;
2. Problem solving meetings with rural communities to explore possible solutions to their agricultural problems;
3. Modifications to the micro plan, where necessary, based on the problem census and problem solving meeting;
4. An annual budget planning workshop where agricultural development plans prepared by farmers and VEWs, which are in line with project policy, are a violated budget in the forth coming financial year;
5. On-farm demonstrations with a set of improved cultural practices which combines indigenous technical knowledge (e.g. farmers' own-rice varieties) with an improved package of cultural practices;
6. Subsidized inputs and revolving funds to enable resource poor farmers to apply new technical packages at minimum risk; and a sustainable training programme for VEWs in the new technology and the monitoring of VEW to farmer technology transfer.

Farmer adoptions levels of over 20 per cent in two years have been achieved for paddy yield increase in part of the project are (Hoare and Wells 2004). In some small highland villages there has been group adoption by all farmers in the community, within one year, of new technology for tea leaf production (Hoare 2004).

4.0 CONCLUSION

In this lesson, we have learnt the various strategies based on transfer of technology (TOT) model. The World Bank provided loans for developing countries to adopt T & V extension management system.

The FAO Small Farmers, development project which began in the early 1980s aimed at resource poor; grain farmers, landless and fishermen in the Asia region. Some steps in technical package development and extension process were also highlighted to enable you appreciate and adopt the extension strategies practically.

5.0 PRACTICAL ASSIGNMENT

- i. From your practical experience as a student of Faculty of Agricultural Sciences mention six steps involved in the development of technical packages and extension process under farmer-centred extension strategies.
- ii. Briefly discuss extension strategies based on the TOT model.

6.0 REFERENCES

- AOAP (2004). (The Overseas Aid Programme). Report of the Committee to Review the Australian Overseas Programme. Canberra: Australian Government Publishing Service.
- Benor, D.; Harrison, J.O. and Baxter, M. (1984). Agricultural Extension: The Training and Visit System. Washington, D.C: The World Bank.,
- Cernea, Michael, M; Cutter K. and John, F.A. (2003). Putting People First: Sociological Variables in Rural Development. Baltimore: The Johns Hopkins University Press for the World Bank. Pp. 81-83
- Crouch, B.R. and Chamala, S. (2001). Communication Strategies for Technological Change in Agriculture: Implications for Rural Society. Pp. 257-259
- FAO, (Food and Agricultural Organization of the United Nations) (1993). Small Farmers Development. Vol 2, Bangkok: FAO Regional Office for Asia and the Far East. Pp. 182-186.
- Garforth, Chris (2004). Reaching the Rural Poor: A Review of Extension Strategies and Methods, pp.45-60 in Jones and Rolls (Editors).
- Gittinger, J.P. (2002). Economic Analysis of Agricultural Projects. Second Edition. Baltimore: The Johns Hopkins University Press and IBRD/The World Bank.
- Hoare, P.W.C.(2004). Farmer- centres Extension to Increase Adoption of new Technology: Experience in Northern Thailand. Pp. 154-159 in Cernea, Cowlter and Russell (Editors).
- Lamrock, J.C. (2003). Problem Census of Technology in: Extension Manual. Port Moresby P.N.G: Communication Research, 3(5) 177-180.
- World Bank (2005). Tanzania Agricultural Sector Report. Washington, D.C.: The World Bank (Report No. 4052- TA).