

Fundamentals of Agricultural Extension Education

Class Notes

For

B.Sc (Ag)1st Year 2nd Sem



Compiled by

Mrs. Aparna Jaiswal

&

Dr Surendra Kumar Rai

Department of Extension Education

College of Agriculture, Balaghat

Jawaharlal Nehru Krishi Vishwa Vidyalaya

Jabalpur 482 004 (M.P.), India

Fundamentals of Agriculture Extension Education

Dr. Sonam Agrawal

Assistant Professor (Agriculture Extension)

College of Agriculture Powarkheda, Hoshangabad, JNKVV(Jabalpur)

Education word is derived from the Latin root 'ex' meaning out and 'tension' meaning stretching. Education is the process of facilitating learning or acquisition of knowledge, skill values and habits. Under education method we can includes teaching training discussion, directed toward research. Education take place them self as well as in front of instructor Education can take place in formal or informal settings and any experience that has a formative effect on the way one thinks, feels, or acts may be considered education.

Definition of Education

Education is the process of developing capability of the individual so that they can adequately response to their situation. We can also define education as process of bringing desirable change into the behaviour of human being.

Webster defined education as the process of teaching to develop the knowledge, skill, or character of the student.

“Sociologist Rodney Stark declares that, Education is the cheapest, most rapid and most reliable path to economic advancement under present conditions,”

Types of Education

There are mainly three types of education, namely, Formal, Informal and Non-formal. Each of these types is briefly described below.

(A) Formal Education

Formal education corresponds to a systematic, organized education model, structured and administered according to a given set of laws and norms, presenting a rather rigid curriculum as regards objectives, content and methodology. It is characterized by a contiguous education process named, as Sarramona1 remarks, “presential education”, which necessarily involves the teacher, the students and the institution. It corresponds to the education process normally adopted by our schools and universities.

- Planned with a particular end in view.
- Limited to a specific period.
- Well-defined and systematic curriculum

- Given by specially qualified teachers.
- Includes activities outside the classroom
- Observes strict discipline.

(B) Informal Education

Informal education is quite diverse from formal education and, particularly, from non-formal education, although in certain cases it is capable of maintaining a close relationship with both. It does not correspond to an organized and systematic view of education; informal education life long process in which portions azure's knowledge, skill, attitude and insight from daily experiences and exposure to the endearment at home.

- Incidental and spontaneous
- Not-pre-planned.
- Not imparted by any specialised agency.
- No prescribed time-table or curriculum.
- May be negative also

(C) Non-Formal Education

It is organized and systematic education activity carried on outside the frame work of the formal system to provide selected type of learning to the particular group of population.

- Derived from the expression 'formal education.
- Outside the realm of formal education.
- Conscious and deliberate.
- To be organised for a homogeneous group.
- Serving the need of the identified group.

The word extension is derived from the Latin roots 'ex' - meaning 'out' and 'tensio' meaning 'stretching'. Stretching out is the meaning of extension. The word 'extension' came to be used originally in USA during 1914. In other words, the word extension signifies an out of school system of education. Education is an integral part of extension. The basic concept of extension is that it is education. Extension means that type of education which is stretched out to the people in rural areas, beyond the limits of the educational institutions to which the formal type of education is normally confined.

Basic Definitions Related to Extension

Extension education is an applied social science consisting of relevant content derived from physical, biological and social sciences and in its own process synthesized into a body of knowledge, concepts, principles and procedures oriented to provide non-credit out of school education largely for adults. - Leagans (1971).

Extension Education is a science, which deals with the creation, transmission & application of knowledge designed to bring about planned changes in the behavior-complex of people, with a view to help them live better by learning the ways of improving their vocations, enterprises & institutions (Reddy, 1993).

Extension Education is a science that brings about desirable changes in the behavior of the concerned persons through educational methods, so as to improve their general standard of living with their own efforts. In fact, it deals with the designs & strategies of transfer of technology to the concerned persons. In other words, what is taught to the farmers is not Extension Education, though its knowledge is applied for the effective & efficient communication of various programmes of change (Singh, 1994).

Extension is education and that its purpose is to change attitude and practices of the people with whom the work is to change. (Ensminger, 1957)

Extension Education is the process of teaching rural people how to live better by learning ways to improve their farm, home and community institutions (Leagans, 1961).

Extension as an out of school education and services for the members of the farm family and others directly or indirectly engaged in farm production to enable them to adopt improved practices in production, management, conservation and marketing. Several authors defined extension in various ways emphasizing the importance of one or the other aspect of extension (National Commission on Agriculture, 1976).

Scope of Extension Education

Extension appears to have unlimited scope in situations where there is need for creating awareness amongst the people and changing their behavior by informing and educating them. Kelsey and Hearne (1967) identified nine areas of programme emphasis, which indicate the scope of agricultural extension.

1. Efficiency in agricultural production.
2. Efficiency in marketing, distribution and utilization.
3. Conservation, development and use of natural resources.
4. Management on the farm and in the home.
5. Family living.
6. Youth development.
7. Leadership development.
8. Community development and rural area development.
9. Public affairs.

The following statements will further amplify the scope of extension.

1. Extension is fundamentally a system of out-of-school education for adults and youths alike. It is a system where people are motivated through a proper approach to help themselves by applying science in their daily lives, in farming, home making and community living.
2. Extension is education for all village people.
3. Extension is bringing about desirable changes in the knowledge, attitudes and skills of people.
4. Extension is helping people to help themselves.
5. Extension is working with men and women, boys and girls, to answer their felt needs and wants.
6. Extension is teaching through "learning by doing" and "seeing is believing".
7. Extension is working in harmony with the culture of the people.
8. Extension is a two-way channel; it brings scientific information to village people and it also takes the Problems of the village people to the scientific institutes for solution.
9. Extension is working together (in groups) to expand the welfare and happiness of the people with their own families, their own villages, their own country and the world.
10. Extension is development of individuals in their day-to-day living, development of their leaders, their society and their world as a whole.

Principal of Extension Education

1. Principle of peoples need and interest

Extension work must be based on the needs & interests of the people. Always programme must be develop according needs & interests these need differ from individual to individual, from village to

village, from block to block, from state to state; therefore, there cannot be one programme for all people.

2. **Principle of grass root level organisation**

A group of rural people in local community should sponsor extension work. They work with local community so that the programme should fit in with the local conditions. The aim of organising the local group is to demonstrate the value of the new practices or programmes so that more & more people would participate.

3. **Principle of cultural difference**

Extension work is based on the cultural background of the people with whom the work is done. Differences in the culture are always being there between extension worker and rural people, success is when extension professionals has to know the level of the knowledge, & the skills of the people, methods & tools used by them, their customs, traditions, beliefs, values, etc. before starting the extension programme.

4. **Principle of cooperation and peoples participation**

Extension is a co-operative venture. It is a joint democratic enterprise in which rural people co-operate with their village, block & state officials to pursue a common cause. Ultimately without the cooperation of people the work cannot be successful and desired result cannot be achieved. The first task of extension education is the cooperation of people and their participation in work. Extension helps people to help themselves. Good extension work is directed towards assisting rural families to work out their own problems rather than giving them ready-made solutions. Actual participation & experience of people in these programmes creates self-confidence in them and also they learn more by doing. People should realise that the task of extension education is their own task. Participation in extension work generates confidence among people for the work. It is not essential that all the members of the society should participate but Extension professionals should try for maximum participation of people.

5. **Principle of cultural change**

Extension education starts with what the learner knows, has and thinks. With this in mind and with an attitude of respect towards clients, the extension professionals must seek to discover and

understand the limitations, taboo and the cultural values related to each phase of programme so that an acceptable approach could be selected in the locality.

6. **Principle of learning by doing**

According to this principle, farmers are encouraged to learn by doing the work themselves and by participating in it. When a person does a work, he gains practical knowledge and experiences the difficulties. Extension professionals are able to understand the problems and provide proper guidance to the farmers and thus, they are able to receive proper information/feedback.

7. **Principle of trained specialists**

It is very difficult that extension personnel should be knowledgeable about all problems. Therefore, it is necessary that specialists should impart training to the farmers from time to time.

8. **Principle of adaptability in use of extension teaching methods**

People differ from each other, one group differs from another group and conditions also differ from place to place. An extension programme should be flexible, so that necessary changes can be made whenever needed, to meet the varying conditions. Extension professionals should have knowledge of extension methods so that they can select proper method according to the condition. Teaching methods should be flexible so that they can be properly applied on people according to their age groups, educational background, economic standard and gender. In extension education, two or more methods should be applied according to the principle of adaptability.

9. **Principle of leadership**

Extension work is based on the full utilisation of local leadership. The selection & training of local leaders to enable them to help in carrying out extension work is essential to the success of the programme. People have more faith in local leaders & they should be used to put across a new idea so that it is accepted with the least resistance.

10. **Principle of whole family**

Extension work will have a better chance of success if the extension professionals have a whole-family approach instead of piecemeal approach or separate & uninterested approach. Extension work is, therefore, for the whole family, i.e. for male, female and children.

11. **Principle of evaluation**

Extension is based upon the methods of science, and it needs constant evaluation. The effectiveness of the work is measured in terms of the changes brought about in the knowledge, skill, attitude, and adoption behaviour of the people, not merely in terms of achievement of physical targets.

12. **Principle of satisfaction**

The end-product of the effort of extension teaching is the satisfaction that comes to the farmer and his family members as the result of solving a problem, meeting a need, acquiring a new skill or some other changes in behaviour. Satisfaction is the key to success in extension work. A satisfied stakeholder is the best advertisement.

13. **Principle of Indigenous Knowledge**

People everywhere have indigenous knowledge system which they have develop through generation of work experience and problem solving in their own specific situation. The indigenous knowledge systems encompass all aspect of life and people considered it essential for their survival.

Objective of Extension

Objectives are end towards which our efforts are to be directed. More specific objectives of extension education are

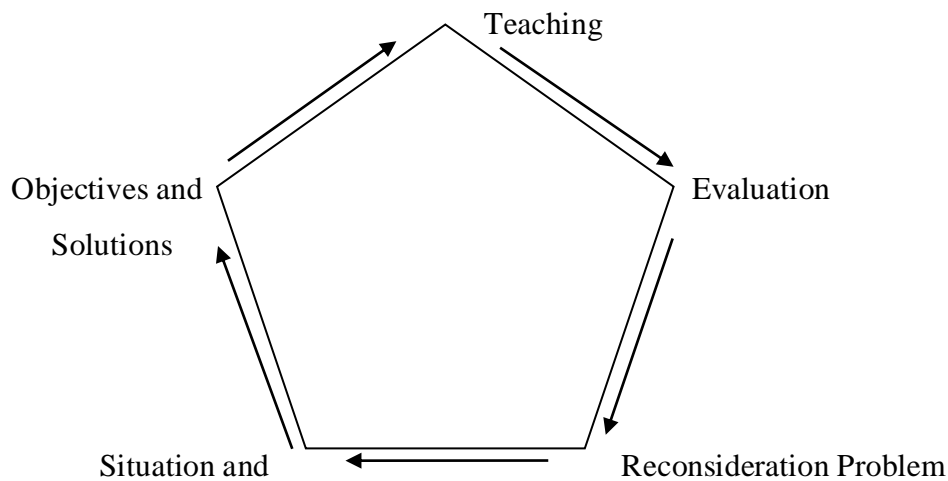
1. To assist people to discover and analyze their problems and identify their felt needs.
2. To develop leadership among people and help them in organizing groups to solve their problems.
3. To disseminate research information of economic practical important in a way people would be work and understand.
4. To assist people in mobilizing and utilizing the resource which they have and which they need from outside.
5. To collect and transmit feedback information for solving management problems.

Extension Educational Process

An effective extension educational programme involves five essential and interrelated steps. This concept of the extension educational process is intended only to clarify the steps necessary in carrying out a planned educational effort. It does not imply that these steps are definitely separate from each other. Experience shows that planning, teaching and evaluation take place continuously, in varying degrees, throughout all phases of extension activities

First step: The first step consists of collection of facts and analysis of the situation. Facts about the people and their enterprises; the economic, social, cultural, physical and technological environment in which they live and work. These may be obtained by appropriate survey and establishing rapport with the people.

The responses obtained are to be analyzed with the local people to identify the problems and resources available in the community. For example, after a survey in a community and analysis of the data, the problem was identified as low income of the farm family from their crop production enterprise.



Second step: The next step is deciding on realistic objectives which may be accomplished by the community. A limited number of objectives should be selected by involving the local people. The objectives should be specific and clearly stated, and on completion should bring satisfaction to the community. Objectives should state the behavioral changes in people as well as economic and social outcomes desired.

In the example, the problem was identified as low income from the crop production enterprise. A deeper probe into the date revealed that low income was due to low yield of crops, which was

attributed to the use of local seeds with low yield potential, application of little fertilizer and lack of protection measures. By taking into consideration the capacity and competency of the people in the community and the availability of resources, the objective was set up to increase the crop yield by 20 per cent within a certain period of time. It was estimated that the increased yield shall bring increased income, which shall enhance the family welfare.

Third step: The third step is teaching, which involves choosing what should be taught (the content) and how the people should be taught the methods and aids to be used. It requires selecting research findings of economic and practical importance relevant to the community, and selection and combination of appropriate teaching methods and aids.

Based on the problems identified in the particular example, technologies like use of HYV seeds, application of fertilizer and plant protection chemicals were selected as teaching content. Result demonstration, method demonstration, farmers' training and farm publications were chosen as teaching methods, and tape recorder and slides were selected as teaching aids.

Fourth step: The fourth step is evaluating the teaching i.e, determining the extent to which the objectives have been reached. To evaluate the results of an educational programme objectively, it is desirable to conduct a re-survey. The evidence of changed behavior should be collected, which shall not only provide a measure of success, but shall also indicate the deficiencies, if any.

In the example, the re-survey after the fixed period of time, indicated that the crop yield had increased by 10 per cent. It, therefore, indicated that there was a gap of 10 per cent in crop yield in comparison to the target (objective) of 20 per cent fixed earlier. The re-survey also indicated that there had been two important deficiencies in carrying out the extension educational program, such as, there was lack of proper water management and the farmers could not apply the fertilizer and plant protection chemicals as per recommendation due to lack of funds.

Fifth step: The fifth step is re-consideration of the entire extension educational programme on the light of the results of evaluation. The problems identified in the process of evaluation may become the starting point for the next phase of the extension educational programme, unless new problems have developed or new situations have arisen.

After re-consideration of the results of evaluation with the people, the following teaching objectives were again set up. For example, they were, training the farmers on proper water

management practices and putting up demonstrations on water management. The people were also advised to contact the banks for obtaining production credit in time to purchase critical inputs. Thus, the continuous process of extension education shall go on, resulting in progress of the people from a less desirable to a more desirable situation.

References

1. Claudio Zaki Dib (1988). Formal, Non-Formal and Informal Education: Concepts/Applicability. Cooperative Networks in Physics Education - Conference Proceedings 173”, American Institute of Physics, New York, pp. 300-315 retrieved from <http://technedib.com.br/downloads/6.pdf>
2. Dimensions Of Agricultural Extension:(Aext191) (1+1). Principles, Philosophy Processes And Objectives Of Extension Retrieved from <http://eagri.org/eagri50/AEXT191/lec02.pdf>
3. Dushi Guari. Notes on the Types of education: formal, informal, non-formal. Retrieved from <http://www.preservearticles.com/notes/notes-on-the-types-of-education-formal-informal-non-formal/17995>
4. Education from Wikipedia retrieved from <https://en.wikipedia.org/wiki/Education>
5. Fundamental of Rural Sociology & Educational Psychology, (AEXT391) (2+0), lect1 retrieved from <http://eagri.org/eagri50/AEXT391/lec01.pdf>
6. Principles of Extension Education, Dairy Extension Education. Retrieved from <http://ecoursesonline.iasri.res.in/mod/resource/view.php?id=4360>
7. Ray. G.L.(2013) Extension Communication and management. New Delhi. Kalayni publication.
8. Sharma, A. (Sep 8, 2016). Education: Meaning, Definition, types of education and characteristics, Extension education: Meaning, definition and concept. Retrieved from <https://www.slideshare.net/Arpita615/education-meaning-definition-types-of-education-and-characteristicsextension-education-meaning-definition-and-concept>

Extension Programme Planning

Dr Surendra Kumar Rai,
Assistant Professor (Agriculture Extension)
College of Agriculture Balaghat, JNKVV, Jabalpur

The first step in any systematic attempt to promote rural development is to prepare useful programmes based on people needs. The development of such programmes, require planning which harmonize with the local needs as the people see them and with the national interests with which the country as a whole is concerned, is an important responsibility of extension personnel at all levels-national, state, district, block & village.

Programme planning is the process of making decisions about the direction & intensity of extension-education efforts of extension-service to bring about social, economic & technological changes.

Program planning is a process which involves multiple steps including the identification of a problem, selection of desired outcomes, assessment of available resources, implementation and evaluation of the program. In other words it is a procedure of working with the people to recognize unsatisfactory situations or problems and to determine possible solutions.

According to Kelsey and Hearne (1967) An Extension Programme is a statement of situation, objective, problems and solutions. It is relatively permanent but requires constant revision.

Leagans (1961) says that an "extension programme" is a set of clearly defined, consciously conceived objectives or ends, derived from an adequate analysis of the situation, which are to be achieved through extension teaching activity'.

Lawrence (1962) says that an "extension programme" is the sum total of all the activities and undertakings of a county extension services. It includes: (i) programme planning process (ii) written programme statement (iii) plan of work (iv) programme execution (v) results and (vi) evaluation.

Programme planning: Programme planning is a decision making process which involves critical analysis of the existing problems and evaluation of available best alternatives to solve these problems by cooperative efforts of the people for community growth and development.

Some relevant terms required to understand in programme planning given below:

Programme: Programme is a written statement which describes proposed developmental activities, the problems they address, the actions, and resources required.

Planning: it is a process which involves studying the past and present in order to forecast the future and in the light of that forecast determining the goal to be achieved.

Plan: Plan is schedule of development work outlining different activities in a specific period. It answers the questions like what, why, how, and when as well as by whom and where the work is to be done.

Aims: Aims are generalized and broad statement of directions with respect to given activities. eg. The improvement of farmers' economic condition.

Objectives: Objectives are expression of ends towards which our efforts are directed. The dictionary meaning of objective is 'something that one's efforts or actions are intended to attain or accomplish' e.g. To increase the yield of rice by 30 percent.

Goal: Goal is the distance in any given direction one expects to go during a given period of time e.g. to increase yield of rice by 10 quintals per hectare in the current year.

Problem: It refers to a situation, condition, or issue that is yet unresolved and after study people decided need to change it.

Solution: Solution is a course of proposed action to change an unsatisfactory condition to one that is more satisfying.

Project: it is a specification of work to be done or procedures to be followed in order to accomplish a particular objective.

Plan: It is a predetermined course of action.

Plan of work: it is an outline of activities so arranged as to enable efficient execution of the programme. The plan of work indicates what, who, how and when the activities will be carried out.

Calendar of Work: Calendar of work is a plan of activities to be undertaken in a particular time sequence.

Objectives of Programme

The general objective of an extension programme is to influence people to transform their life in better way. The assumption is that there is a need for change and make people aware are of this, if they are not and to develop their needs. Important objectives of having a programme planning as per Kelsey and Hearne (1966) are as follows:

1. To ensure careful consideration of what is to be done and why.
2. To furnish a guide against which to judge all new proposals.
3. To establish objectives toward which progress can be measured and evaluated.
4. To have a means of choosing the important (deep rooted) from incidental (less important) problems; and the permanent from the temporary changes.
5. To develop a common understanding about the means and ends between functionaries and organizations.
6. To ensure continuity during changes of personnel.
7. To help develop leadership.
8. To avoid wastage of time & money and promote efficiency.
9. To justify expenditure and to ensure flow of funds.
10. To have a statement in written form for public use.

Principles of Extension Programme Planning

Extension programmes have the definite purpose of improving rural life through individual, group and community action. Extension programme planning has certain principles, which holds good irrespective of the nature of the clientele, and the enterprises they may be pursuing, viz.:

- 1. Extension programmes should be based on an analysis of the past experiences, present situation and future needs.**

For programme determination adequate information about the people and their situation have to be collected. The present information is to be analyses and interpreted on the basis of past experiences, by taking local people into confidence. This shall help in arriving at the future needs

2. Extension programmes should have clear and significant objectives, which could satisfy important needs of the people.

The main objective of programme development is to satisfy the need of people. For this purpose significant objectives pertaining to important needs of the people should be selected and clearly stated. The emphasis will be on what is attainable rather than on what is ideal although one should not lose sight of the ideal.

3. Extension programmes should fix up priority on the basis of available resources and time.

Generally in developed countries rural people have multiple problems but at the same time all problems cannot be taken up for solution because of limitation of the available resources. Therefore considering this fact priority should be decided in the programme.

4. Extension programmes should clearly indicate the availability and utilization of resources.

To make programme practical and workable it is important to clearly indicate the availability of funds, facilities, supplies and the needed personnel and how these resources will be utilized.

5. Extension programmes should have a general agreement at various levels.

Programme prepared at various levels such as village, district, state and national levels. The extension programme of any department or level should not be conflict or contradict with the extension programme of the any other department or level.

6. Extension programmes should involve people at the local level.

Extension programme are implemented at local level. Therefore, local people should be involved in all stages starting from programme formulation to programme implementation.

7. Extension programmes should involve relevant institutions and organization.

Extension programme cannot be implemented in isolation. It requires the support of many institution and organizations. The programme should broadly indicate the institutions and organizations to be involved and how they shall contribute in attaining the programme objectives.

8. Extension programme should have definite plan of work.

The plan of work may be separately drawn up or incorporated in the programme. The programme should at least broadly indicate how it will be executed.

9. Extension programme should provide for evaluation of results and reconsideration of the programme.

The programme should make provision for periodical monitoring and evaluation of results to judge its progress. On the basis of the findings of evaluation the programme should be suitably modified for attainment of objectives within the stipulated time.

10. Extension programmes should provide for equitable distribution of benefits amongst the members of the community.

In community generally resource full persons benefited more compared to resource poor in any programme. As this creates social disparity and social tension the planning of extension programmes should give adequate emphasis on the weaker section of the community.

Steps in Extension Programme Planning Process

The process of extension, as applied to development programmes, involves five essential phases (SOTER) i.e. Analyzing the Situation, Objectives or Goals to be Accomplished, Teaching, Evaluating the Teaching, Reconsidering (Leagans, 1961). These steps are intended only to clarify the necessary actions in carrying out a planned extension educational effort.

The program development process is on-going and continuous. Each educational initiative, workshop or event we carry out modifies the initial situation. As a consequence, any plan of action continues to evolve and change as the situation or context changes.



Fig. Steps of Programme Planning

1. Collection of facts

Sound plans are based on availability of relevant & reliable facts. This includes facts about the village people, physical conditions, existing farm & home practices, trends & outlook. Besides, other facts about customs, traditions, rural institutions, peoples' organisations operating in the area, etc. should be collected. The tools & techniques for collecting data include systematic observations, a questionnaire, interviews & surveys, existing governmental records, census reports, reports of the Planning Commission, Central Bureau of Statistics, and the past experiences of people.

2. Analysis of the situation

After collecting facts, they are analysed and interpreted to find out the problems & needs of the people.

3. Identification of problems

As a result of the analysis of facts, the important gaps between 'what is' & 'what ought to be' are identified and the problems leading to such a situation are located. These gaps represent the people's needs.

4. Determination of objectives

Once the needs & problems of the people have been identified, they are stated in terms of objectives & goals. The objectives represent a forecast of the changes in the behaviour of the people and the situation to be brought about. The objectives may be long-term as well as short-term, and must be stated clearly.

5. Developing the plan of work

In order to achieve the stated objectives & goals, the means & methods attaining each objective are selected; and the action plan, i.e. the calendar of activities is developed. It includes the technical content, who should do what, and the time-limit within the work will be completed. The plan of work may be seasonal, short-term, annual or long-term.

6. Execution of the plan of work

Once the action plan has been developed, arrangement for supplying the necessary inputs, credits, teaching aids, extension literature etc. has to be made and the specific action has to be initiated. The execution of the plan of work is to be done through extension methods for stimulating individuals and groups to think, act and participate effectively. People should be involved at every step to ensure the success of the programme.

7. Evaluation

It is done to measure the degree of success of the programme in terms of the objectives & goals set forth. This is basically done to determine the changes in the behaviour of the people as a result of the extension programme. The evaluation is done not only of the physical achievements but also of the methods & techniques used and of the other steps in the programme planning process, so that the strong & weak points may be identified and necessary changes may be incorporated accordingly.

8. Reconsideration

The systematic and periodic evaluation of the programme will reveal the weak and strong points of the programme. Based on these points, the programme is reconsidered and the necessary adjustments & changes are made in order to make it more meaningful & sound.

Programme planning is not the end-product of extension activities, but it is an educational tool for helping people to identify their own problems and make timely & judicious decisions. From the above mentioned cycle, it is clear that the planning of an extension programme comprises a logical series of consecutive steps. The first 4 steps form the programme-phase. The steps 5-7 form the action-phase. The step 8, i.e. reconsideration, joins the 2 phases together, where it leads to the fact-collecting step, thus beginning once more the never ending or continuous process of planning the extension programme.

References:

1. Ahmed, M. R. (1991). Planning and Designing Social Forestry Project. In Ahmed, M. R. (ed.) Social Forestry and Community Development, pp. 109 - 116. FAO, FTTP.
2. Extension Program Planning and Evaluation. (2020 Jan. 10). retrieved from <http://eagri.org/eagri50/AEXT392/lec02.html>
3. Legans J.P. (1961). Characteristics of Teaching and Learning in Extension Education, Extension Teaching Methods, The Communication Process and Programme Planning to Meet People's Needs in Extension Education in Community Development . Directorate of Extension, Govt. of India, New Delhi.
4. Programme planning. (2020 Jan. 15) retrieved from <http://ecoursesonline.iasri.res.in/mod/resource/view.php?id=4384>
5. Ray G. L. (2017). Extension Communication and Management. New Delhi, Kalyani Publisher. Pp 227-248
6. Sandhu A. S. (2003). Extension Programme Planning. New Delhi, Oxford and IBH Publishers.
7. Sasidhar P V (2019Dec .21).(Programme Planning .retrieved from <http://www.egyankosh.ac.in/bitstream/123456789/39227/1/Unit-1.pdf>
8. Van den Ban, A.W. and Hawkins, H.S. (2002). Agricultural Extension, New Delhi, CBS Publishers and Distributors.

Extension System in India

Sheela Raghuwanshi

Assistant Professor, Deptt. of Extension Education
College of Agriculture, Tikamgarh, JNKVV(Jabalpur)

Rural development is an obligation of the Government to raise the standard of living of the rural people. World Bank defined rural development in terms of an improvement of the economic and social life of the rural poor. Rural development encompasses all sectors of rural life. In its widest sense, it implies development of every aspect of rural life. There are number of rural development programs were started by the Nationalists and Social reformers. Some of these programs gradually disappeared or some were merged with Government sponsored schemes later. This is because of various reasons like lack of encouragement of the Government, lack of financial support, inadequate, in experienced and untrained staff. For the clarity, we can divide these Development Programmes in two parts: Pre-Independence Programmes, and Post-Independence Programmes.

Pre-independence era Programmes:-

1. Sriniketan Project

In 1920, Rabindra Nath Tagore laid the foundation of the Sriniketan Institute for Rural Reconstruction with the help of sociologist Shri L.M. Hurst. and formulated a programme for the all-round improvement in the Village of his Zamindari with the objective of studying rural problems and of helping the Villagers to develop agriculture, improving the livestock, formation of co-operatives. He believed in self help and mutual help and wanted the village workers to be involved in the life of rural people and work for their welfare. He started this programme in the cluster of **8 Villages** but were not very successful and can only be described as rural welfare works.

The absence of market facilities, professional guidance, lack of co-ordination between the implementing authority and improper incentives for workers made the task more difficult and desired results could not be achieved

2. Gurgaon experiment

In 1920, Mr. Brayne had been appointed on the post of Deputy Commissioner in Gurgaon district and he began this project of rural upliftment in his district, which became famous as “Gurgaon Project.” The programme aimed at improving agriculture, education, health and sanitation facilities, co-operation, and social development with greater vigor. He stressed on the dignity of labour, selfhelp and conducted propaganda through films, songs, skits and plays with a view to increase farm yields and improving health standards. Although this project got some success yet this scheme also could not survive more because this project was also based upon the sentiments of F.L. Brayne and when he was transferred, gradually this programme also stopped.

2. Marthandam Project

Dr. Spencer Hatch of the **Young Men's Christian Association (YMCA)** set up a Project in 1921 at Martandam, 25 miles south of Thiruvananthapuram. The purpose of this experiment was to bring about a complete upward development towards a more complete and meaningful life for rural people three folded development -**spirit, mind and body**. To achieve this they launched five sided programme-spiritual, mental, physical, economic and social development were also included. The main stress in programme was on the principle that people should not depend on Government for support because when concessions and help in any field are not given, the people develop in them a feeling of self-help and self- reliance.

The objectives of this programme was the YMCA should work in the Villages to eliminate poverty. For the Rural Demonstration Centre at Martandam had a demonstration farm, prized animals, equipment for the honey industry and other cottage vocations.

3. Firka Development scheme

The Firka Development scheme of Madras was a Government sponsored Scheme in 1946 this programme aimed at organizing the villagers for a happier, more prosperous and fuller life in which the individual villagers had the opportunity to develop both as an individual and as a unit of a well-integrated society. Among Pre-Independence project, this was the biggest project. Selection of Firkas-based on general backwardness of the area and where there is possibility of initiating cottage

industries. The priority areas of work for each Firka included Rural reconstruction facility, Drinking water facility, Sanitation Khadi and other village industries.

For the overall development of the area planning was framed in two categories

- ✓ Short term plans (development of infrastructure, communications)
- ✓ Long term plans (knowledge inputs, attainment of Gandhian ideal)

Post- Independence Era Programme

1. Etawah Pilot Project :-

In 1947, after Independence, the Government of India prioritised on rural development and how this work should be managed. For this the guidance of an experienced person was needed. The Government of India urged the U.S. government to send Mr. Albert Mayor to India because he had enough experience of rural development programme and was a Rural Sociologist.

Under the leadership of **Lt.Col.Albert Mayor of USA** , the office of **Etawah Pilot Project** was established by the U.P Govt. in October 1948 at Mahewa in the Etawah District. Initially 64 villages were selected around Mahewa District for the development. It was also called **Average District Plan** because the project was initiated in the normal environment . This programme named as pilot project means the work is for specific location and further it shows the path.This programme was the **forer unner** of CDP . (**Community Development Programme**)

2. Nilokheri Project

Nilokheri Project was started by **S.K. Dey** design to rehabilitate about 7000 displaced person (immigrants) from Pakistan after partition . He began this project using 100 acre of swampy land spreading in the midst of Karnal and Kurukshetra. The colony had its own dairy, poultry,piggery,printing press, engineering workshop ,bone meal factory all run on cooperative lines. The Scheme was called “**Mazdoor Manzil**” because it was based on the principle of ‘he who would not work neither shall he eat.

S.No.	Name of Programme	Year	Started by	Place	Objectives
Pre-Independence Programme					
1.	Sriniketan	1920	Rabindra Nath Tagore	Sriniketan (Calcutta) West Bengal	<ul style="list-style-type: none"> ✓ To help the rural people in establishing cottage industry. ✓ To inspire the people to follow new technology. ✓ Development of dairy farming. ✓ To create the feeling of co-operation
2.	Gurgaon Project	1920	F.L Bryne	Gurgaon	<ul style="list-style-type: none"> ✓ To increase crop production ✓ To control extra expenditure ✓ To improve the health. ✓ To develop the feeling of women education,
3.	Marthandam Project	1921	Dr. Spencer	Marthandam	<ul style="list-style-type: none"> ✓ To develop the

			Hatch	(Tamil Nadu)	<p>feeling of self reliance amongst the rural people.</p> <p>✓ To improve the spirit of cooperation and self-respect.</p> <p>✓ To bring the desirable change in the attitude of rural people.</p>
4.	Firka Development	1946	Madras Government	Madras (Tamil Nadu)	<p>✓ All-round development of rural people.</p> <p>✓ To develop the means of drinking water and communication.</p> <p>✓ To develop the committees of panchayat and co-operatives</p>
Post-Independence Programme					
1.	Etawah Pilot Project	September,1948	Lt.Col. Albert Mayor	Mahewa District-Etawah (U.P)	<p>✓ To see what degree of production and social improvement can be obtain.</p>

					<ul style="list-style-type: none"> ✓ To find out the feeling of cooperation and initiative amongst the rural people of an average area.
2.	Nilokheri Experiment	July, 1948	S.K.Dey	Kurukshetra (Haryana)	<ul style="list-style-type: none"> ✓ Self-dependence in all the fields of life. ✓ To arrange for professional training and provide occupation for the people on the basis of their experience. ✓ To eliminate the middle-man system

References:-

1. Mondal, S. (2019). Fundamentals of Agricultural Extension Education. New Delhi, Kalyani publishers.
2. O.P. Dhama and O.P. Bhatnagar (2006). Education and Communication for Development, New Delhi: Oxford and IBH Publishing Co.
3. Ray GL (1996) Extension Communication and Management, Calcutta, West Bengal: Naya Prakash Publications.

Various Extension / Agriculture Development Programmes Launched by ICAR / Govt. of India

Kinjulck C Singh

Subject Matter Specialist, KVK Rewa

India has become self sufficient in agriculture through increasing food production by many folds after green revolution. It was an integrated effort of the policy, research and extension support. Agriculture development in India is very location specific. However the Union Government play a guiding role in formulating policies to accelerate growth of agricultural sector. The programmes conceived at national level are mainly implemented by the various departments of state government. Indian Council of Agricultural Research (ICAR) is an apex body at the national level that supports research and extension activities to evolve effective Transfer of Technology (TOT) models. The State Agricultural Universities also contemplates to develop extension models suitable to take up transfer of technology besides implementing the models evolved by ICAR system. (K. Narayana Gowda).

There are many agricultural development and extension programmes which were launched by Government of India and ICAR. Some of them are listed below for a glance to understand their objectives and features. Among these programmes some are mentioned as “Programmes for technological Development” like IADP, IAAP, ICDP and HYVP, where as some are refereed as “Development programmes with Social Justice” viz MFAL, DPAP, T&V, IRDP, TRYSEM, NREP, DWACRA, NAEP, TMO, JRY, EAS, SFAC and SGSY. Later on various programmes were designed for “Infrastructure Development” like NATP, PURA, NAIP, NREGA and NFSM. Realizing the importance of changing climate and for resource conservation programmes like NICRA and FFS and SHC have been incorporated in the last decade. On a keen observation it is realized that every new programme was designed to fill the deficiency of previous programmes and experiences. Hence these programmes looks like quite related to each other and sometimes overlapping too. However they are capable to address every section of rural community in general and farming community in particular. Programmes introduced in 21st century involves ICT component to ensure faster delivery of information.

S.N.	Name of the programme	Year of Start	Target Group	Objectives
	Intensive Agricultural District Programme (Package Programme)	1960	District with high potential to increased yield.	<p>To achieve rapid increase in the level of agriculture production through a concentration of financial, technical, extension and administrative resources;</p> <p>To achieve a self-generating breakthrough in productivity and to raise the production potential by stimulating the human and physical process of change; and</p> <p>To demonstrate the most effective ways of increasing production and thus, to provide lessons for extending such intensified agricultural production programmes to other areas.</p>
	Intensive Agricultural Area Programme	1964-65	-,,-	To bring about 20 to 25 per cent of the cultivated area of the country under the intensive agricultural development (Improved version of package programme).
	High Yielding Variety Programme	1966-67	Punjab, Haryana and Western parts of UP	To attain attaining self-sufficiency in food through high yielding varieties combined with the application of high analysis and balanced fertilizer, irrigation, plant protection, improved implements etc.
	National	1964	100 districts	To demonstrate convincingly the

	Demonstration		mainly through the State Agricultural Universities	<p>genetic production potentialities of major crops.</p> <p>To fully exploit these demonstrations for the purpose of training farmers and field extension functionaries in improved cultivation practices.</p> <p>To provide the research workers and opportunity to get firsthand knowledge of the problems being faced by the farmers in adopting high yielding varieties and recommended package of practices.</p> <p>To determine the income and employment generation potentialities of the crops/subjects under demonstration, and educate the farmers and extension agents about them.</p> <p>To influence the extension system of the state Departments of Agriculture and voluntary organizations in the country by demonstrating the yield gaps and pointing out operational constraints.</p>
	Command Area Development Programme	1974	Area near River for assured irrigation	<p>To ensure a faster and better utilization of irrigation water in selected major and medium irrigation projects.</p> <p>To increase productivity per unit of land and water.</p> <p>To develop integrated system of</p>

				<p>effective irrigation water distribution and efficient water management practices.</p>
	Tribal and Hill Area Development	1973-74	Tribal area and Hilly belts	<p>To ensure best utilization of water and land for agriculture and horticulture.</p> <p>The improvement of land, water and electricity.</p> <p>To create facility of housing for the landless farmers.</p> <p>To minimize the traditional planting of trees and Jhoom farming on the farms.</p> <p>To encourage the side business-cattle development, dairy development, piggeries, goat, sheep, beehive and silk-worm taming.</p> <p>To aid the tribal area, to sanction the loan and to free them from landlords.</p>
	Operational Research Project	1974-75	Cluster of watershed area	<p>To test, adopt and demonstrate the new agricultural technology on farmer's fields in a whole village or in a cluster of few contiguous villages/watershed area.</p> <p>To determine the profitability of the new technologies and their pace of spread among the farmers.</p> <p>To identify the constraints both technological, as well as socio-economic that are barrier to rapid change.</p> <p>To demonstrate group action as a method of popularizing the modern</p>

				technologies at a faster rate.
	Krishi Vigyan Kendra	1974	Whole District	<p>The main objective of the KVK was to provide a strong training support for bringing about production breakthrough in agriculture. Now the objectives have been redesigned as followed- To promptly demonstrate the latest agricultural technologies to the farmers as well as extension workers of State Departments of Agriculture/Horticulture/ Fishery/ Animal Science/ NGOs with a view to reduce the time lag between the technology generation and its adoption.</p> <p>To test and verify the technologies in the socio-economic conditions of the farmers with a view to study the production constraints and to modify the technologies to make them appropriate.</p> <p>To impart trainings to the practising farmers/ farm women, rural youth and field level extension functionaries by following the methods of "Teaching by doing" and "Learning by doing".</p> <p>To back-up with training and communication supports to the district level development departments viz;</p>

				Agriculture/ Horticulture/ Fisheries/ Animal science and NGOs in their extension programmes
	Lab to Land Programme	1979	Small, marginal farmers and landless agricultural labourers particularly scheduled castes and scheduled tribes	The programme intended to improve the economic condition of targeted group by transfer of improved technology developed by agricultural universities and research institutions.
	Drought Prone Area Programme	1973-74	Drought Prone Area	The basic objective of DPAP was to reduce the severity of the impact of the drought and stabilizing the income of the people, particularly, the weaker sections of the society together with restoration of ecological balance.
	Small Farmers Development Agency	1971	Marginal and small farmers and agricultural labourers	The basic objective of this agency was to enable selected target groups of marginal and small farmers and agricultural labourers to improve their income through productive activities and improving their existing ones.
	Marginal Farmers and Agricultural Labour Development	1971		
	National Rural Employment	1977	Rural Poor	To provide productive assets to the rural poor to enable them to generate

	Programme			<p>additional or incremental income out of the provided assets and also leave a surplus to repay the loan.</p> <p>To provide employment to the rural poor by creating durable community assets or undertaking other work programme both during busy and lean period.</p> <p>To provide basic infrastructural facilities like clean drinking water, medical facilities, education, electrification, rural roads etc.</p> <p>To provide clinical and other types of guidance and support to the unemployed to make them the potential entrepreneurs for self-employment..</p>
	Training of Rural Youth for Self-Employment	1979	Rural Youth	To provide technical skill to the rural youth from the families below poverty line to enable them to take up self employment in the broad fields of agriculture and allied activities, industries, services and business enterprises.
	Integrated Rural Development Programme	1980	BPL Families	The objective of Integrated Rural Development Program is to help families who live below the poverty line to enhance their state of living and to empower the poor by helping them develop at every level. The program's objectives are met by providing

				productive assets and inputs to its target groups. The assets, which could be in the primary, secondary or tertiary sector are provided as financial assistance to these families in the form of government subsidies as well as loans or credit from financial institutions.
	Rural Landless Employment Guarantee Programme	1983	Landless rural poor	Generating gainful employment Creating proactive assets in rural areas. Improving the overall quality of rural life.
18	Jawahar Rozgar Yojana (NREP + RLEGP)	1989	Rural Poor Families	Generation of additional gainful employment for the employed and underemployed persons in the rural areas.
	National Agriculture Extension Project	1982-83	Farmers	To strengthen the reorganized agricultural extension system. To conduct district level bimonthly technical workshops. To conduct district level diagnostic survey. To develop literature on crops and agricultural enterprises suitable for the district. To organize farmers interaction sessions.
	Watershed	1994-	Human as	To develop wastelands or degraded

	Development Programme	95	well as animals	<p>lands, drought-prone and desert areas on watershed basis, keeping in view the capability of land, site conditions and local needs.</p> <p>To promote the overall economic development and improving the socioeconomic condition of the resource poor and disadvantaged sections inhabiting the programme areas.</p> <p>To mitigate the adverse effects of extreme climatic conditions such as drought and desertification on crops, human and livestock population for their overall improvement.</p>
	National Agricultural Technology Project	1998	-	<p>The overall objective of NATP was to revitalize the agricultural technology generation assessment, refinement and dissemination systems. It had three components. These were:</p> <p>ICAR organization and management reforms</p> <p>Expansion of location specific research on production system and</p> <p>Testing of innovations in technology dissemination</p>
	Institute Village Linkage Programme	1999		<p>Introduce technological intervention with emphasis on stability and sustainability along with productivity of small production system.</p>

				<p>To introduce and integrate the appropriate technologies to sustain technological interventions and their integration to maintain productivity and profitability taking environmental issues into considerations in comparatively well defined production systems.</p> <p>To introduce and integrate the appropriate technologies to increase the agriculture productivity with marketable surplus in commercial farm production systems.</p> <p>To facilitate adoption of appropriate post - harvest technologies for conservation and on - farm value addition of agriculture products, by products and wastes for greater economic dividend and national priorities.</p> <p>To facilitate adoption of appropriate technologies for removal of drudgery increased efficiency and higher income of farm woman.</p> <p>To monitor socio-economic impact of the technologies intervention for different production systems.</p> <p>To identity extrapolation domains for new technology modules based on environmental characterization at meso and mega levels.</p>
--	--	--	--	---

	National Agricultural Innovation Project	2006	All stakeholders in agriculture	To alleviate the accelerated and sustainable transformation of Indian agriculture in support of poverty easing and income generation via cooperative development and application of agricultural innovations by the public organizations in partnership with farmers groups, the private sector and other stakeholders.
	National Innovations on Climate Resilient Agriculture (NICRA)	2011	Farmers	<p>To enhance the resilience of Indian agriculture covering crops, livestock and fisheries to climatic variability and climate change through development and application of improved production and risk management technologies.</p> <p>To demonstrate site specific technology packages on farmers' fields for adapting to current climate risks.</p> <p>To enhance the capacity of scientists and other stakeholders in climate resilient agricultural research and its application.</p>
	Attracting and Retaining Youth in Agriculture	2015	Rural youth	<p>To attract and empower the Youth in Rural Areas to take up various Agriculture, allied and service sector enterprises for sustainable income and gainful employment in selected districts.</p> <p>To enable the Farm Youth to establish network groups to take up resource and capital intensive activities like</p>

				<p>processing, value addition and marketing.</p> <p>To demonstrate functional linkage with different institutions and stakeholders for convergence of opportunities available under various schemes/program for sustainable development of youth.</p>
	<p>Farmers FIRST (Farm, Innovations, Resources, Science and Technology) Programme</p>	2016	Farmers	<p>To enhance farmer-scientist interface, enrich knowledge and facilitate continued feedback.</p> <p>To identify and integrate economically viable and socially compatible technological options as adoptable models for different agro-ecological situations.</p> <p>To develop modules for farm women to address drudgery reduction, income enhancement and livelihood security.</p> <p>To study performance of technologies and perception of the farmers about agriculture as a profession in the rural settings.</p> <p>To build network of linkages of organizations around the farm households for improving access to information, technology, input and market.</p>

				To institutionalize Farmer FIRST process.
	Mera Gaon Mera Gaurav	2015	Farmers	<p>To promote the direct interface of scientists with the farmers to accelerate the lab to land process.</p> <p>To ensure that farmers benefit from best farm practices by providing required information, knowledge and advisories on regular basis by adopting villages.</p> <p>To create awareness among farmers about the organisations and their programmes and schemes as well as government policies related to the farming sector.</p> <p>To imbibe a sense of ownership among the agricultural scientists of the country.</p>
	Soil Health Card	2015	All farmers	<p>To provide a basis to address nutrient deficiencies in fertilization practices.</p> <p>To strengthen functioning of Soil Testing Laboratories (STLs) through capacity building.</p> <p>To diagnose soil fertility related constraints with standardized procedures.</p> <p>To develop and promote soil test</p>

				<p>based nutrient management.</p> <p>To disseminate soil testing results through SMSs</p>
--	--	--	--	---

References:-

1. Dhama, O.P. and Bhatnagar, O.P. (1991). Education and Communication for Development. New Delhi, Oxford IBH Publishing Co.
2. Gowda, K. N.(2016) Agricultural Extension Systems in India. retrieved from <http://fliphtml5.com/bxhp/sxdi/basic>
3. Lab to Land Programme.(2012,Jan 11). Retrieved from <http://ecoursesonline.iasri.res.in/mod/page/view.php?id=15377>
4. Sharma, O.P. (2012). Development perspective of extension education. Udaipur, Agrotech Publishing Academy.
5. Singh, R. (1987) .A textbook of extension education. Ludhiana, Sahitya Kala Prakashan.
6. Soil Health Card (2014, March 20) retrieved from <https://soilhealth.dac.gov.in/Content/blue/soil/about.html>

New Trends in Agriculture Extension

Kamini Bisht

Assistant Professor

Department of Extension Education, College of Agriculture

JNKVV, Jabalpur, MP

Privatization of Extension

Privatisation broadly refers to a process by which the government reduces its role in an activity and encourages private sector to take up these roles.

Concept and Definition:

- ❖ ChandraShekara, 2001: The Process of funding and delivering the extension services by private individual or organisation is called Private Extension.
- ❖ Bloom indicated that private sector extension involves personnel in the private sector extension involves personnel in the private sector.
- ❖ Vanden Ban and Hawkins (1996) state that in private sector extension, farmers are expected to share the responsibility for the service and pay all or part of the cost.
- ❖ Saravanan and ShivalingeGowda (1999) operationalized Privatization as follows: “Privatization of extension service refers to the services rendered in the area of agriculture and allied aspects by extension personnel working in private agencies or organisations for which farmers are expected to pay a fee (or free) and it can be viewed as supplementary or alternative to public extension services”.

These concepts about the privatization emphasize three aspects:

- ❖ It involves extension personnel from private agency/ organization.
- ❖ Clients are expected to pay the service fee.
- ❖ Act as supplementary or alternative to public extension service.

Through the process of privatization, extension effectiveness is expected to improve by:

- ❖ reorienting public sector extension with limited and well focused functions,

- ❖ more number of extension providers (institutional pluralism) resulting from active encouragement by the public sector to initiate, operate and expand.
- ❖ more private participation leading to the availability of specialised services hitherto not available from the public system
- ❖ user contributions to extension leading to improved financial sustainability,
- ❖ support and control by clients leading to client orientation

Privatisation can take place broadly in two ways:

- ✓ Dismantling of Public sector
- ✓ Controlled Privatisation

Reasons behind privatisation of extension services

Following are some of the reasons behind privatisation in agricultural extension services:

- 1) Fiscal crisis: Many less developed country's governments have found it difficult to make adequate resources available for extension. Financial pressures have, in turn led to the search for ways of reduction in public sector costs.
- 2) Disappointing performance of public extension system: Impact of public extension system in agricultural development is disappointing. Extension work is ineffective, does not match with farmer's needs, there is little consideration for cost-effectiveness and less competent extension personnel have no accountability to farmers. Moreover, public extension alone will never answer to entire demand of farming community.
- 3) Changing contexts and opportunities: In recent past Indian agriculture is shifting from mere subsistence level to commercialized agribusiness to meet all challenges and opportunities of globalization and liberalization, effective alternative extension approach is required. Increasing commercial and specialized nature of agriculture will demand quickly and technically sound advice, based on scientific analysis with appropriate marketing information. Further India is facing population explosion which had resulted into reduction in land holding size.

Due to improved transport network and better communication facilities private agencies and communication media are also reaching to remote villages.

Therefore, there is an urgent need for an efficient technological guidance along with recent market information, which is only possible through privatization of extension services.

- 4) The extension worker: the extension worker and farmers ratio is very wide in India i.e. 1:1000 and it is further widens due to engagement of extension workers in administrative work, official correspondence, report etc.

Advantages of Private Extension System (Sulaiman and Sadamate , 2000):

1. Reorienting public sector extension with limited and well focussed functions. More number of extension providers (institutional pluralism) resulting from active encouragement by the public sector to initiate, operate and expand.
2. More private participation leading to the availability of specialized services hitherto not available from the public system.
3. Support and control by clients leading to client orientation.

Disadvantages of Private Extension System (Vanden Ban and Hawkins, 1998):

1. Privatization may hamper free flow of information.
2. Farmers may be less interested to disseminate technologies to other farmers what they have learnt from private extension.
3. Only commercial farmers will be benefited through privatization and subsistence farmers will seldom be able to pay the fee.
4. The commercial interest of the private agencies may jeopardise the efforts of research and extension of eco-friendly and sustainable agriculture.
5. Contact between farmers and extension agents get declined.

Cyber Extension/ e-Extension

Cyber

According to Oxford dictionary the word Cyber means “relating to Information technology, the Internet and virtual reality, the Cyber space. The word has its origin from cybernetics.

Cyber space

The cyber space is the imaginary or virtual space of computer connected with each other on networks, across the globe. These computers can access information in form of text, graphics, audio, video and animation files. Software tools on network provide facilities to interactively access the information from connected services. The cyber space thus can be defined as the imaginary space behind the interconnected telecommunications and computer networks, the virtual world.

Extension

Extension stands for “the action or process of enlarging or extending something”. It could be extension of area, time or space.

E-extension and cyber extension are more or less synonymous and can be used interchangeably. Cyber extension and e-extension are extension approaches; whereas ICT is the tools by which various services are delivered to the clientele fulfilling the objectives of e-extension/ cyber extension (Mondal, 2019).

Cyber extension

According to Sharma (2005) Cyber extension can be defined as the “Extension over cyber space”. Cyber extension means “using the power of online networks, computer communications and digital interactive multimedia to facilitate dissemination of agricultural technology”. Cyber extension includes effective use of information and communication technology, national and international information networks, internet, expert system, multimedia learning systems and computer based training systems to improve information access to the farmers, extension workers, research scientists and extension managers.

Cyber agricultural extension is an agricultural information exchange mechanism over cyber space, the imaginary space behind the interconnected computer networks through telecommunication means. It utilizes the power of networks, computer communications and interactive multimedia to facilitate information sharing mechanism (Wijekoon, 2003).

IT and ICT

IT (Information Technology) refers to computer based technology and telecommunications. IT refers to an entire industry that uses computers, networking, software and other equipment to manage information. Generally, IT departments are responsible for storing, processing, transmitting, retrieving and protecting digital information of the company.

ICT (Information Communications Technology) can be seen as an integration of IT with mediation broadcasting technologies, audio/ video processing and transmission and telephony. Therefore, ICT can be seen as an extended acronym for IT.

ICTs are those technologies that can be used to interlink information technology devices such as personal computers with communication technologies such as telephones and their telecommunication networks. The PC, laptop and tablet with e-mail and internet provides the best example (Mondal, 2019).

Information provided through Cyber extension

Cyber extension can provide large amount of information to farmers. Some of those as mentioned by Sharma are:

1. Weather: Daily information of maximum and minimum temperature, day length, direction and speed of wind, rain fall, relative humidity and weather forecasting.
2. Alert: Information regarding type of disaster, sudden change in weather, outbreak of diseases and insects etc.
3. Insurance: Detail information about insurance of farmers, his crop, animal and agricultural assets like tractors, implements and tools etc.
4. General awareness: Information about vaccination, cleanliness, health, family planning and nutrition.
5. Rural Finance: Information about micro finance and subsidy etc.
6. Education: Detail information about farmers training and educational knowledge of his children about professional and non-professional institution.
7. Animal Science: The detail regarding the local animal and well known diseases, better breeds, balanced feed, shed management, health etc.

Advantages of Cyber Extension

1. Information can be provided quickly to farmers.
2. Round the clock service to farmers.
3. Information can be accessed from any place on the earth.
4. Helpful in enhancing the communication efficiency.
5. Preserves the quality of message.

6. Experts can be contacted directly.
7. Per unit cost is less as compared to traditional system of extension.

Limitation of cyber extension

1. Lack of reliable telecom infrastructure in rural areas.
2. Erratic or no power supply.
3. Lack of ICT trained manpower (willing to serve) in rural areas.
4. Lack of content (locally relevant and in local language).
5. Low purchasing power of rural people.
6. Lack of holistic approach.
7. Issues of sustainability.

Farmer-Led Extension

Concept

The farmer led extension approach gives farmers the opportunity to share their experiences and practices through a method demo with fellow farmers in the area. It was noted that farmers who were successful in their farming venture have established credibility among their peers. In selecting the farmer extensionist, the primary consideration is- he should be an innovative farmer, active and hardworking, honest and credible interested in learning, accepted and committed to the community, and most importantly interested to share his knowledge and skills. Likewise a farmer extensionist must have conducted a techno demo trial and field day, preferably attended the FFS. He must also have the capacity and willingness to finance the cost of technology.

Farmer-to-Farmer extension is defined here as “the provision of training by farmers to farmers, often through the creation of a structure of farmer promoters and farmer trainers.

There are 5 types of farmers-led extension:

1. Farmers to farmer
2. Farmer field school
3. The problem census
4. Problem solving approach
5. NGO government collaboration

Paradigm shift from production-led to farmers-led extension system (Kokate et al., 2009)

Components	Production-led	Farmers-led
Purpose/ Objective	Transfer of production technologies	Capacity building (especially farmers extensionist), create para-professional technologies extension workers, creating or strengthening local institutions
Goal	Food self-sufficiency	Livelihood security including food, nutrition, employment to alleviate poverty Sustainability and conserving bio-diversity
Approach	Top-down, commodity and supply driven	Participatory, bottom-up and demand driven
Actors	Mostly public institutions	Pluralistic with public, private, non-government and farmers organizations as a partner rather than competitors
Mode	Mostly interpersonal/ individual approach	Integration of clients oriented on-farm participatory/ experiential learning methods supported by ICTs and media
Role of extension agents	Limited to delivery mode and feedback to research system	Facilitation of learning, building overall capacity of farmers and encouraging farmers experimentation
Linkages/ liaison	Research-Extension-Farmers	Research-Extension-Farmers Organizations (FIGs, CIGs, SHGs)
Emphasis	Information management, Production “Seed to Seed”	Knowledge management and sharing
Nature of technology	Input intensive, crop based and general recommendations as per agro-climatic zone, fixed	Knowledge intensive, broad based, farming system perspective and blending with ITKs

	package of information	
Critical areas	Improvement, production and protection	Decision support system, integrated farming system approach, natural resource management, client group formation and community empowerment
Critical inputs	Money and material	Access to information, building human and social capital
Accountability	Mostly government	To farmers rather than donors

Market-Led Extension

Concept

With globalization of the market, farmers need to transform themselves from mere producers-sellers in the domestic market to producers cum sellers in a wider market sense to best realize the returns on their investments, risks and efforts.

Agriculture without economy is nothing. So the market linkage is a must for agriculture. Market is congregation of prospective buyers and sellers with a common motive of trading a particular commodity. Extension is the spreading/ reaching out to the mass. Market-led extension is the agriculture and economics coupled with extension is the perfect blend for reaching at the door steps of common man with the help of technology. Market led extension is the market ward orientation of agriculture through extension.

Basics of market led extension

- Market analysis
- Market intelligence
- Use of technology

Aspects of market led extension

- Community mobilization
- Forming CIGs
- Forward and backward linkages
- Improvement of effectiveness of existing markets

- Improvement of efficiencies of marketing channels

Paradigm shift from Production-led Extension to Market-led Extension (Adopted from MANAGE, 2008)

Aspects	Production-led extension	Market-led extension
Purpose/ Objective	Transfer of production technologies	Enabling farmers to get optimum returns out of the enterprise
Expected end results	Delivery of messages Adoption of package of practices by most of the farmers	High returns
Farmers seen as	Progressive farmer High producer	Farmer as an entrepreneur “Agripreneur”
Focus	Production / yields “Seed to seed”	Whole process as an enterprise / High returns “Rupee to Rupee”
Technology	Fixed package recommended for an agro-climatic zone covering very huge area irrespective of different farming situations	Diverse baskets of package of practices suitable to local situations/ farming systems
Extensionists’ interactions	Messages Training Motivating Recommendations	Joint analysis of the issues Varied choices for adoption Consultancy
Linkages/ liaison	Research-Extension-Farmer	Research-Extension-Farmer extended by market linkages
Extensionists’ role	Limited to delivery mode and feedback to research system	Enriched with market intelligence besides the TOT function Establishment of marketing and agro-processing linkages between farmer groups, markets and processors

Contact with farmers	Individual	Farmers' Interest Groups Commodity Interest Groups /SHG's
Maintenance of Records	Not much importance as the focus was on production	Very important as agriculture viewed as an enterprise to understand the cost benefit ratio and the profits generated
Information Technology support	Emphasis on production technologies	Market intelligence including likely price trends, demand position, current prices, market practices, communication net work, etc besides production technologies

Challenges to Market Led Extension:

- Gigantic size of Public Extension System of the public extension in the country.
- Generation of data on market intelligence would be a huge task by itself.
- The present extension system suffers from several limitations of stationery, mobility, allowances, personal development of cadres etc.
- Infrastructure challenges.
- Storage and preservation of produce
- Minimization post harvest losses.
- Capacity building of extension personnel and farmers.

Expert system

Concept

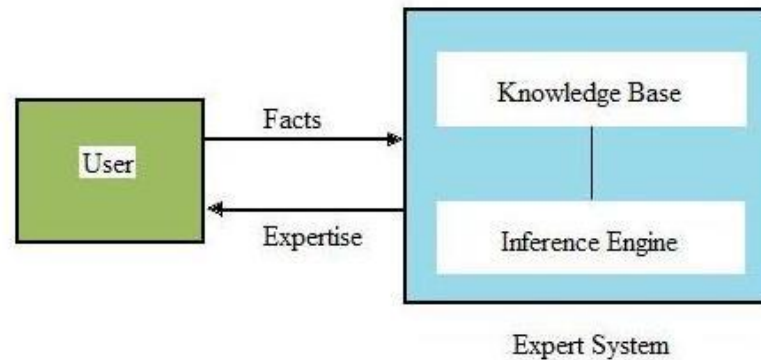
An Expert System is a software application that attempts to reproduce the performance of one or two more human experts. The concept of expert system development came from the subject domain of Artificial Intelligence (AI). The expert system is used to behave like a human expert to solve the problem with the help of pre-set conditions in the software application. The computer programme uses knowledge and inference procedures to solve problems.

Definition

Daniel Hunt (1986) – Expert system is an intelligent computer program that uses knowledge and inferences procedures to solve problems.

According to Prasad and Babu (2008) Expert system can be defined as a tool for information generation from knowledge. It is a computer programme designed to stimulate the problem-solving behaviour of an expert in a narrow domain or discipline.

An expert system is typically composed of at least three primary components. These are the inference engine, the knowledge base, and the User interface.



- Knowledge base - This component consists of data, facts and rules for a certain topic, industry or skill, usually equivalent to that of a human expert.
- Inference engine - This component uses the facts and rules in the knowledge base to find and learn new knowledge or patterns. It is responsible for gathering the information from the user, by asking various questions and applying it wherever necessary. It seeks information and relationships from the knowledge base and to provide answers, predictions and suggestions the way a human expert would.
- User interface - A user interface is the method by which the expert system interacts with a user.

Expert systems use information technology to gain and use human expertise. Obviously, this can be very beneficial to organizations. Expert Systems can:

1. Provide answers for decisions, processes and tasks that are repetitive
2. Hold huge amounts of information
3. Minimize employee training costs
4. Centralize the decision making process
5. Make things more efficient by reducing the time needed to solve problems
6. Combine various human expert intelligences

7. Reduce the number of human errors
8. Provide strategic and comparative advantages that may create problems for competitors
9. Look over transactions that human experts may not think of

Objectives (Mondal, 2019)

The main objectives of developing expert system in agriculture are:

1. To enhance the performance of agricultural extension personnel and farmers.
2. To make farming more efficient and profitable.
3. To reduce the time required in solving the problems and performing the routine tasks of extension workers.
4. To maintain the expert system by continuously upgrading the database.

Difference between Conventional Extension And Expert System Extension

(Bahalet al.,2004)

S. No.	Conventional Extension	Expert System of Extension
1	Universal approachability of same information is a problem	Universal approachability of same information is possible
2	Information is given whatever is available without considering needs and resources	Information is chosen based on their needs and resources
3	No Cost benefit analysis	Cost benefit analysis
4	Information flow depends on availability of agent	Information through Cyber Cafe at any place at any time
5	Require users to draw their own conclusion from facts	Conclusion is drawn based on the decision given by the expert

Some examples of expert system in India

1. Rice-Crop: The MANAGE has developed an expert system to diagnose pests and diseases for rice crop and suggest preventive/curative measures. The rice crop doctor illustrates the use of expert-systems broadly in the area of agriculture and more specifically in the area of rice production through development of a prototype, taking into consideration a few major pests and diseases and some deficiency problems limiting rice yield.
2. Expert System on Wheat Crop Management - EXOWHEM Expert system on wheat crop management is an expert system which includes all aspects of wheat production on India. The main goal of the system is to provide the users with all kinds of suggestions and advices regarding the wheat crop production. The system is designed as web based application by IASRI New Delhi that covers agricultural operations, fertilizer application, variety selection, as well as the economic benefits. It is purely a rule based expert system.
3. AMRAPALIKA is an Expert System for the diagnosis of pests, diseases, and disorders in Indian Mango. The system makes diagnosis on the basis of response/responses of the user made against queries related to particular disease symptoms. A rule-based expert system is developed using Expert System Shell for Text Animation (ESTA). The knowledge base of the system contains knowledge about symptoms and remedies of 14 diseases of Indian mango tree appearing during fruiting season and non-fruiting season.
4. e-Sagu is a tool for IT-based personalized Agro-Advisory system. ("Sagu" means cultivation in Telgu language). It aims to improve farm productivity by delivering high quality personalized (farm-specific) agro-expert advice in a timely manner to each farm at the farmer's door-steps without farmer asking a question. In e-Sagu, the development of IT such as (Database, Internet, and Digital Photography) is extended to improve the performance of agricultural extension services. The e-Sagu system was implemented during 2004 by delivering advisory to 1051 cotton farms for the farmer of three villages in Warangal district in Andhra Pradesh.

Advantages

The advantages of expert system are:

1. Expert Systems are useful in many aspects and ready to use by end user as advisory system.
2. Provides consistent answers for repetitive decisions, processes and tasks.

3. Holds and maintains significant levels of information.
4. Encourages human expert to clarify and finalize the logic of their decision-making.
5. Never “forgets” to ask a question, as a human might.
6. They can respond at great speed due to the inherent advantages of computers over humans.
7. Unlike humans, they do not get tense, fatigue or panic and work steadily during emergency situations.

Disadvantages

However, there are also disadvantages to expert systems, such as:

1. Lacks common sense needed in some decision making.
2. Cannot make creative responses as human expert would in unusual circumstances.
3. Not capable of explaining the logic and reasoning behind a decision
4. Cannot adopt to changing environments, unless knowledge base is changed

Reference:

1. De, D. and Jirli, B. (2010). A Handbook of Extension Education. Jodhpur, Agrobios (India).
2. Govind, S., Tamilselvi, G. and Meenambigai, J. (2011). Extension Education and Rural Development, Jodhpur, Agrobios (India).
3. Joy, D. and Sreekumar, K. (2014). A Survey of Expert System in Agriculture. *International Journal of Computer Science and Information Technologies*, 5 (6): 7861-7864.
4. Mishra, S. and Akankasha. 2014. Expert Systems In Agriculture: An overview. *International Journal of Science Technology & Engineering*, 1(5): 45-49.
5. Mondal, S. (2018). Communication Skills and Personality Development, Entrepreneurship Development and Business Communication. New Delhi, Kalyani publishers.
6. Mondal, S. (2019). Fundamentals of Agricultural Extension Education. New Delhi. Kalyani publishers,
7. Sulaiman, V.R. and Sadamate, V.V. (2000) ‘Privatising agricultural extension in India’, Policy Paper 10. New Delhi: National Centre for Agricultural Economics and Policy Research.
8. The Computer Revolution/Artificial Intelligence/Expert Systems. Retrieved from https://en.m.wikibooks.org/wiki/The_Computer_Revolution/Artificial_Intelligence/Expert_Systems

Rural Development

Dr. S.P.Singh

Assistant Professor, College of Agriculture, Tikamgarh

JNKVV(Jabalpur)

Integrated Rural Development Programme is a very major programme of poverty alleviation and rural development. The meaning of the term integrated, basically implies the provision of a package of interlinked programmes mutually supporting and reinforcing so that a one-dimensional approach to development is avoided so, the integration is horizontal, vertical, spatial and temporal.

Integration covers four principal dimensions:

- i. Integration of sectoral programmes.
- ii. Spatial integration.
- iii. Integration of social and economic processes.
- iv. The policies with a view to achieving a better fit between growth, removal of poverty and employment generation.

Specifically, it involves a sharp focus on target groups, comprising small and marginal farmers, agricultural laborers and rural artisans, and an extremely location specific planning in rural areas.

- IRDP was envisaged to help small and marginal farmers, agricultural laborers and rural artisans.
- The approaches followed for SFDA, MFAL, DPAP and CAD programmes were proposed to be utilized according to their relevance's in particular areas to generate employment opportunities and increase production.

Objectives

The main objectives are creating assets, employment, increased income removal of poverty and minimizing in equality.

IRD Programmes were

- Programmes of Agriculture Development including efficient utilization of land and water resources with scientific technology.
- Programmes of animal husbandry as a subsidiary occupation directed mainly to small farmers and Agricultural Labour households.

- Programmes of marine fishery including harvesting of natural resources through trawlers, mechanized country boats.
- Programmes of social forestry and farm forestry.
- Programmes of village and cottage industries including handlooms, sericulture and beekeeping as important occupations for the artisan classes of the rural population.
- Programme of service sector of the rural economy as self-employment for poorer families.
- Programmes for skill formation and mobility of labour to meet the needs of organized labour for development works.

The IRDP concept was launched in 1978-79 in 2300 blocks in the country and it was extended to all blocks in the country with effect from 2to Oct. 1980. Simultaneously SFDA's were merged with IRDP.

Target Beneficiaries of IRDP

- IRDP focuses mainly on providing assistance (subsidiary and institutional credit) to selected families for income generating assets in order to range their incomes through self employment so that they can move above the poverty line.
- IRDP follows the principle of the "poorer of the poor first". Hence, although the poverty line (PL) has been defined as Rs 6,400 as annual family income, only those families with an annual income of less than Rs 4,800 is eligible for assistance under this programme.

The target group includes:

- Small farmers, marginal farmers, agricultural laborers rural artisans and other families which are below the poverty line.
- At least 30 per cent of the families are to be drawn from SC's/STS.
- At least 30 per cent of the beneficiaries are to be women.

Implementation and funding of IRDP

- The district rural development agency (DRDA) was created to function at the district level as a single agency for the implementation of IRDP, DPAP, DPP etc., to implement integrated rural development.
- Funds for the programme are released to DRDA's on the stipulation that expenditure should be equally shared by the centre and the state.

Short Comings/Drawbacks and Limitations of IRDP

- The resources provided were inadequate.
- There was large number of over dues.
- Poor quality of assets provided to the beneficiaries.
- The follow up of the beneficiaries was inadequate.
- Lack of training facilities to s-small and marginal farmers.

Training of Rural Youth for Self Employment (TRYSEM)

TRYSEM was launched in 1979 as a separate national scheme for training rural youth for self employment. The compelling reasons for launching the programme being the huge backlog of unemployment and under employment among the rural youth. Forty youth, both men and women were to be selected in each block and trained in both skill development and entrepreneurship to enable them to become self-employed. It was generating activities in the rural areas; the influx of rural youth to urban areas could curb. Moreover, local needs could also meet with local resources, thereby giving a fillip to rural development.

Objectives of TRYSEM

- To provide rural youth (18-35 years) from families below the poverty line with training and technical skills to enable them to take up self-employment in agriculture, industry, services and business activities.
- Training is perceived not only in terms of provision of physical skills. But also change in attitude, enhancement of motivation and skills in human relations etc., are also ought to be imparted.
- Self-employment is defined as gainful employment on a full time basis which results in income which is sufficient for the family of the youth cross the poverty line. Situation of employment in which the means of production are owned, hired or taken on lease are taken to be self-employment situations.

Features of TRYSEM

- TRYSEM became the “self employment for youth” component of IRDP and was introduced in all the 5000 blocks in the country.

- An identified youth will be put through a period of training either in a training institution or under a master crafts men.
- Duration of training is flexible depending upon types of courses.
- Trainers are given stipend and a tool kit.
- Successful trainee is eligible to receive a subsidiary/credit/income generating asset under IRDP.
- At least 50 percent of the youth to be trained for self-employment either for secondary or tertiary sector activity.
- Wage employment training was to be in the secondary and tertiary sectors.
- BDO selects the eligible youth belonging to the target group with the help of VLW's.
- The identification of locations is done by the DRDA in consultation with district level officers of different departments.
- DRDA prepares a resource inventory for training facilities like ITI's polytechniques, KVI's, KVK's, NYK's etc.,
- DRDA is responsible for the implementation of TRYSEM.

Beneficiaries of TRYSEM

- Members of the poorest family first
- Priority should be given to members of SC's and ST's.
- At least 1/ 3 of candidates should be women.
- Preference should be given to persons who have completed the 12 month course under the national Adult Education programme.

Short coming of TRYSEM

- Implementation is generally uneven.
- Training lacked appropriate technology in the package provided.
- In the selection of trade, self-employment opportunities and financial viability were not adequately assessed.
- Assistance in the provision of raw materials and marketing has been lacking.
- Every district did not have training centers of TRYSEM.
- In a large number of cases, the assistance provided to TRYSEM trainees from IRDP projects had no link to the training they had received

Jawahar Rozgar Yojana (JRY) 1979

The finance minister announced a new scheme which aimed at providing employment in backward districts with chronic poverty and unemployment. This new scheme was named as Jawaharlal Nehru Rozgar Yojana. It was also stated in 1979 and the NREP and RLEGP would be merged into one programme and implemented as a centrally sponsored scheme with a 80:20 sharing funds between the centre and the states. Later it was called as JRY.

Objectives

- To generate additional gainful employment for the unemployed rural youth.
- To create productive community assets which would benefit the poor sections thus, strengthening the rural infrastructure.
- To improve the overall quality of life in areas.

Main features of JRY

- The target group comprises persons living below poverty line.
- Preference is given to SC's and ST's among the poor.
- At least 30 per cent of the beneficiaries are women.
- All works which lead to creation of durable community assets can be taken up.
- Higher priority is to be given to works which are required as infrastructure under poverty alleviation programmes.
- For social forestry works the participation of non-governmental organizations (NGOS) is ought.
- DRDA's/ Zilla Parishads are responsible for implementation of JRY at district level and village panchayats at the Gram Panchayats Level.

Swarnjayanti Gram Swarojgar Yojana (SGSY)

This Scheme was launched after a review and restructuring of the previous Integrated Rural Development Program(IRDP) and allied schemes like Training of Rural Youth for Self Employment (TRYSEM), Development of Women and Children in Rural Areas (DWCRA), Million Wells Scheme (MWS), Supply of Improved Toolkits to Rural Artisans (SITRA) & Ganga Kalyan Yojna. SGSY was launched on April 1, 1999 and is the only self employment Programme currently being implemented.

The objective of the SGSY is to bring the assisted Swarozgaris above the poverty line by providing them income generating assets through bank credit and Government subsidy. The Scheme is being implemented on a 75:25 cost sharing of between the Centre and the States.

In the Union Budget 2009-10, Allocations of Rs. 2350 Crore was made for establishing micro-enterprises in rural areas through activity clusters and group approach under Swarnjayanti Gram Swarozgar Yojana. At least 50% of the Swarozgaries will be SCs/STs, 40% women and 3% disabled.

Objectives:

- Focussed Approach to poverty Alleviation by setting up a large number of Micro enterprises in rural areas of our country. Capitalising group lending.
- Overcoming the problem of running multiple programmes overlapping each other. A holistic programme of micro enterprises covering all aspects of self employment which includes organising rural poor into Self help groups. Integration of various agencies like District Rural Development Agencies, Bank, Line Departments., Panchayati Raj Institutions, NGOs etc. Bring the assisted poor family above BPL by providing them a mix of income generating assets like bank credit + Government subsidy.
- National Livelihood Mission: India's Ministry of Rural Development is proposing to re-design the Swarnjayanti Gram Swarozgar Yojana (SGSY) into National Livelihood Mission (NRLM).

Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)

Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) was launched in February 2006. Undoubtedly, it is one of the largest, most ambitious and wide ranging social security programmes in the world.

The preamble to the act reads as under –

An act to provide for the enhancement of livelihood security for the households in rural areas of the country by providing at least one hundred days of guaranteed wage employment in every financial year to every household whose adult members volunteer to do unskilled manual work and for matters connected there with or incidental there to.'

The Act was notified in 200 rural districts in its first phase of implementation (with effect from Feb 2, 2006). In financial year 2007-08, it was extended to additional 130 districts. The remaining districts were notified under MGNREGA with effect from April 1, 2008. 2

Since 2008, MGNREGA has covered the whole of India barring the districts that have hundred percent urban populations.

Mandate and Objectives

The mandate of the act is to provide 100 days of guaranteed wage employment in a financial year (FY) to every rural household whose adult members volunteer to do unskilled manual work. In this Act "Adult" means a person who has completed his eighteenth year of age and a "household" is defined as members of a family related to each other by blood, marriage or adoption and normally residing together and sharing meals.

The Objectives of The Programme Includes-

- Ensuring social protection for the most vulnerable sections of people residing in rural India through wage employment opportunities. Chapter III of the Act calls upon every State Government to make a Scheme (National Rural Employment Guarantee Scheme, NREGS) to give effect to this objective.
- Ensuring livelihood security to the poor through creation of durable assets which would lead to sustainable development and in due course diminish the dependence of rural folk on schemes such as NREGS.

MGNREGA- Guidelines 2013 provide for a number of labour intensive works which can be undertaken in the NREGS so as to create valuable assets leading to improved water security, soil conservation, higher land productivity, strengthening drought proofing and flood control.

- Ensuring empowerment of the marginalized communities in rural India, especially women Schedule Castes (SCs) and Scheduled Tribes (STs) and the aged through the rights based programme. MGNREGA envisions 100 days of guaranteed employment as a matter of right to every rural household.
- Strengthening decentralized, participatory planning and execution through convergence of various anti-poverty and livelihood initiatives.
- The Scheme to begin with aimed to merge ‘Sampoorna Gramin Rojgar Yojana’ (SGRY) and National Food for Work program (NFWP) and bring the provisions of these two programmes within the ambit of NREGS.

- Deepening democracy at the grassroots by strengthening the Panchayati Raj Institutions by ensuring planning, implementation and supervision of the programme at the lowest levels. Panchayati Raj Institutions (PRI) are systems of Local Government in rural India at three levels of administration; village, block and district. Gram Panchayat (GP) is a primary unit of the three- tier structure of local self-governance in rural India. At the intermediate level of PRIs lies the 'Block'. A Block means the community development area within a district comprising a group of Panchayats. 'Block Samiti' is the executive body at the intermediate level, while 'Zila Parishad' is the executive body at the district level and lies at the top of PRIs in India. The MGNREGA envisages Gram Panchayat, Block Samiti and Zila Parishad as

important hierarchical levels for the purpose of implementation of the scheme, enjoining certain duties upon the State and Central Governments at the same time.

- Stemming the tide of migration of rural population to urban areas through the availability of work in or near the village. Provision of decent work at reasonably good wages is one of the prime objectives of the Act.

Salient Features of The Act

- **Registration:** Adult members of Rural Household willing to do unskilled manual work may apply for registration either orally or in writing to the concerned Gram Panchayat. It is noteworthy that the unit of registration is house hold (HH). The act aims to provide 100 days of employment to a rural household.

- **Job Card:** It is the duty of the Gram Panchayat headed by the 'Pradhan' or 'Sarpanch' to verify the place of residence, age of the members of a house hold etc. and to issue the job card (JC) to the household after due registration.

Job card is a very important document and forms the basis for identification, demanding employment and updating the number of days for which employment was provided and wages paid. A Job Card is to have a unique identification number and the Act provides that it should be issued within 15 days of application for registration.

- **Demand for Work:** A written application is to be made by any of the registered members of the household to the GP or Block Office stating the time period for which the work is sought. It is incumbent on the part of the GP to acknowledge the receipt of written application against which the guarantee to provide employment within 15 days operates. The application can be filed individually or

in groups and must be for at least fourteen days of continuous work. Multiple applications can be made in advance provided the periods for which employment is sought don't overlap. Applicants provided with work are to be notified in writing or by public notice at the office of Gram Panchayat.

• **Unemployment Allowance:** The Gram Panchayat and the Programme Officers shall ensure that every applicant shall be provided unskilled labour work as per provisions within 15 days of application for work or from the date from which work was sought whichever is later. Priority shall be given to women in such a way that one third of the beneficiaries shall be women who have registered and requested for work. In case employment is not provided within 15 days, the State (as per the Act) will pay an unemployment allowances to the beneficiary. The rate of unemployment allowance shall not be less than one fourth of the wage rate for the first thirty days during the financial year and not less than one half of the wage rate for the remaining period of the financial year till the applicant or any other number of his household is called to report for work or the allowance in lump sum becomes equal to the amount in terms of wages for 100 days of work for the financial year.

• **Wages:** Wages are to be paid as per the state wise Government of India (GOI) notified MGNREGA wages. Wages are to be paid according to piece rate as per the Schedule of Rates (SORs) without any gender bias.

• **Planning, Implementing and Monitoring:**

The Panchayats at district, intermediate and village levels are the principal authorities for planning and implementation of the scheme made under this Act.

A) The functions of the Panchayats at the district level are :-

- i) To finalize and approve block wise shelf of projects to be taken up under the scheme.
- ii) To supervise and monitor the projects taken up at the block and district level.

• **Central and State Employment Guarantee Councils :** In order to monitor the implementation of the scheme at the State and Central Government levels, separate Central and State employment Guarantee Councils have been set up. Additionally these councils perform advisory functions on all matters concerning the scheme to the respective Governments and prepare annual reports pertaining to the scheme to be submitted before the State legislative.

References

1. De, D. and Jirli, B. (2010). A Handbook of Extension Education. Agrobios (India), Jodhpur.
2. Mondal, S. (2019). Fundamentals of Agricultural Extension Education. Kalyani publishers, New Delhi.