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OFFICE OF THE PRINCIPAL, RURAL EXTENSION TRG. CENTRE
JUL 1965
Ex. 64
KRISHNAGIRI RESERVOIR PROJECT

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EXTENSION EDUCATION INSTITUTE

NILOKHERI

Ex 63

AGRICULTURAL EXTENSION TRAINING

BRIEF RECORD OF ACTIVITIES OF THE SEVENTH SPECIAL COURSE IN EXTENSION METHODS TECHNIQUES AND COMMUNICATION MEDIA FOR EXTENSION OFFICERS (AGRICULTURE)

(3-2-1965 to 16-3-1965)

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GOVERNMENT OF INDIA
DIRECTORATE OF EXTENSION
MINISTRY OF FOOD AND AGRICULTURE
NEW DELHI

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INTRODUCTION

The seventh course for Extension Officers (Agriculture) commenced on the 3rd February 1965. The group of 27 Agricultural Extension Officers was from the States of J & K, Rajasthan, U.P. and West Bengal.

SYLLABUS

In view of the emphasis on the practical application of Extension methods the syllabus for the Extension Officers was revised. According to the suggestions made by the participants topics on plant protection, and agricultural implements were included. The revised syllabus will be found in the following pages.

READING ASSIGNMENTS

Specific assignments from books and publications were selected by the members of the teaching staff to cover the topics included in the syllabus. A separate shelf was allotted for these books and publications. Adequate time was provided to the participants both during the class hours as well as in the evenings. Each participantswas given a regist to make notes on the portions assigned to him. These exercises were extremely useful to the group.

TALKS

As it is not possible to include the lecture notes of all the talks given during this period it was decided to include one from each member of the teaching staff. Emphasis has been given to topics under Extension education, farm management and communication.

METHOD DEMONSTRATIONS

In this course the participants were given an opportunity to select suitable topics for method demonstrations. Each sub-group prepared its plans under the guidance of a consultant attached to it. These individual exercises have given the group an opportunity to develop skill in this important technique. Only a few method demonstrationsplans have been selected to be included in this booklet.

WORKSHOP ON VISUAL AIDS

As the group stressed the importance of visual aids a workshop for two days was organised. The members of the teaching staff provided the

thooretical frame-work and gave the necessary information regarding all types of visual aids. Demonstrations of how to prepare simple visual aids without the help of an artist were also given. The sub-groups were allotted flashcards and the topic selected was vegetable cultivation. The participants were able to get a better understanding of the use of visual aids by taking an active part in this workshop.

FIELD PROBLEMS

In order to get the participants closer to each other an opportunity was given to each participant to present problems they have faced in the field. A suggestive proforma was given to the group to bring out their experience and achievements. This method was also used with the object of helping the Extension Officers to develop the skill of oral communication. The views of the group have been summarised under field problems.

VILLAGE PRACTICALS

Based on past experience emphasis has been given in this course to practising the principles of Extension in a realistic situation. In the pilot visit to the selected villages the groups were able to study the village requirements and select the items for village practicals. During their short stay in the three villages the groups were able to cover a series of assignments that not only helped them to practice Extension methods in realistic situations but also to take up items that are of benefit to the farmers.

The highlights of these village practicals have been the laying out of a result demonstration and kitchen gardening projects. In one of the villages the participants were able to strengthen the youth club which was in existence.

STUDY TOUR

As the group of Agricultural Extension Officers was keenly interested in the Intensive Agricultural Districts Programme, the Mandi district was selected for study tour. Before proceeding to this place details of the I.A.D.P. project were given to the group. The essential features of the Mandi project were also explained to the group. A detailed proforma in which suggestions have been given for

group assignments will be found in this booklet. By dividing the project into nine parts for nine sub-groups it would be possible for the entire group to make a study of the project in depth. This item again provided the members of the groups to develop skill in field observation and interviewing.

The object in preparing this booklet is to invite suggestions from all those interested in such programmes to improve upon the training programme. It is expected of those who receive this booklet to help us by their valuable comments.

(Herbert W.Butt
PRINCIPAL

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S Y L L A B U S

A tentative outline of the syllabus for the special course on Extension Methods for the Agricultural Extension Officers was revised and presented to the group at the very outset. In preparing this outline attention was given to the practical application and treatment of the syllabus. The talks and discussions have been reduced to a minimum of 40 periods. The time allotted for village practicals has not been changed as it was felt necessary to provide atleast six days for this purpose. For individual assignments on the campus 40 periods have been allotted so that the participants get an opportunity for developing skills in Extension methods and oral communication.

During the first three days this outline was discussed by sub-groups in detail with the help of a consultant. The participants were given the opportunity to examine the topics so that they could make suggestions for deletion, amendments, and additions if necessary.

In this process the participants were also asked to suggest certain subject-matter areas in which they need more information. Some of the suggestions made by the participants were to give them more practice in the use of Extension methods especially in realistic situations. They felt that the latest results of researches especially in the field of plant protection should be made available to them. They requested more opportunity for developing skills in the use of agricultural implements.

As the participants were interested in agricultural Extension emphasis in the syllabus has been given to farm management and Intensive Agricultural District Programme.

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OUTLINE OF SYLLABUS FOR SIX WEEKS SPECIAL COURSE IN EXTENSION METHODS, TECHNIQUES AND COMMUNICATION MEDIA TO THE AGRICULTURAL EXTENSION OFFICERS, AT THE EXTENSION EDUCATION INSTITUTE, NILOKHERI (PUNJAB)

INTRODUCTION.

From the experience in training personnel for the Community Development Programmes it is felt that it would be very helpful to equip the field workers with practical training on Extension methods. During the training programmes much attention is given to orientation philosophy and background of subjects connected with Community Development. After the initial training the field workers face many problems in the practical application of the principles they have learnt. In many cases it has been observed that the faith in Extension methods is lacking. In order to create more confidence in the field workers emphasis on Extension methods and techniques with practical application would be very useful. The object of this syllabus is to concentrate attention on developing skills and confidence in Extension workers by exposing them to a variety of situations.

OBJECTIVES:

The fundamental questions that arise in trying to improve the quality of Extension workers are as follows.

1. What kind of situations and exercises will help to bring about a change in the attitude of the field workers?

2. How can we ensure that the field workers have become confident in using Extension methods?

3. What kind of learning experiences should be provided to develop certain fundamental skills in the Extension workers?

With these basic questions the objectives of this specific training programme are as follows:

1. To help the Extension Officers and field workers gain confidence in the use of Extension methods.

2. To develop skills in certain fundamental areas in the workers.

3. To stimulate interest among the workers by providing them opportunities of self-analysis and group analysis.

4. To help the Extension workers to use Extension methods in practical situations more effectively.

5. To develop a better understanding of Extension methods in practicals and village situations.

6. To identify and evolve effective visual aids suitable for different situations.

7. To develop capacity for analysis and clear thinking.

METHOD OF APPROACH:

With a view to fulfil these objectives the syllabus envisages new approaches in individual and group work with freedom to adopt and select Extension methods after trial. An opportunity will be given to develop fundamental skills in each individual. An attempt will be made to corelate training with the specific needs, problems, worries and expectations of the participants. Each subject will be closely associated with programme planning, implementation, and evaluation.

The treatment of the syllabus will be core of the training programme. An attempt will be made first to discuss the theoretical frame-work of each method, prepare plans for implementation, present the plans on the campus before coworkers and staff, analyse the presentations constructively and applying the principles in realistic situations. In the treatrent particular emphasis will be given to provide opportunities to the participants to try out each method carefully in the villages attached to the Institute.

The participants will be encouraged to take part in the programme and use their own initiative as far as practicable. In the process of applying principles to practical situations the participants will develop an awareness of human relations, skills, and situations. Personal attention will be given to develop poise, self-confidence and leadership traits in the participant. In addition to group discussions each participant will be given individual attention through guidance and counselling. The syllabus serves as a broad outline in order to develop certain skills in the participants with regard to Extension methods. The participants will have freedom to amend, delete and improve upon the outline presented to them.

The syllabus is broadly divided in four phases - the first acquiring the necessary information and formulating the theorectical framework - second practising the principles in class and on the campus with detailed analysis- the third phase is to try these methods in a realistic situation- the fourth phase is to review the reactions of the villagers and the effectiveness of the methods used in the villages. It is expected that in exposing the participants to these four phases they will be able to learn largely through the process of self-training.

TREATMENT OF SYLLABUS:

1. Break-up of training period:

Seventh special course	- 3-3-1965 - 16-3-1965		
Total No. of days	- 42		42
Holidays & sundays	- 10	days	
Orientation & valuation of the programme	- 2	"	32
Communication workshop	- 2	"	
Pilot visit(Village practicals)	- 1	"	
Village practicals	- 6	"	
Study tour	- 5	"	
Discussion on field problems	- 1	"	
	16	"	
Total No. of days available for discussion, talks, and campus work			16

Daily time-table:

6.30 AM - 7.00 AM - Prayer and community assignment

8.30 AM - 9.45 AM - 1st session.

9.45 AM - 10.45 AM - 2nd " .

10.45 AM - 11.15 AM - Assignment/library/guidance and counselling.

11.15 AM - 12.30 PM - 3rd Session.

2.00 PM - 3.00 PM - Assignment/library/guidance and counselling.

3.00 PM - 4.00 PM - 4th session

4.00 PM - 5.00 PM - 5th "

5.30 PM - 6.30 PM - Recreation and games.

7.00 PM - 8.00 PM - As mentioned below:

Monday - Audio-visual programme

Tuesday - Library

Wednesday- Committee meetings

Thursday - No programme

Friday - Library

Saturday - No programme

General areas to be taken up will be as follows:

1. Fundamentals of Extension:

Philosophy of extension, extension methods, audio-visual aids.

2. Sociological aspects of Rural Development:

Groups and group methods, social change, art of addressing groups, interviews case studies, how to make people accept new ideas.

3. Agricultural Development:

Farm plans, village production plans, block development plans, intensive agricultural district programme.

4. Miscellaneous:

Home science extension, evaluation, follow-up.

Specific skills:

In formulating the syllabus and the method of treatment the main purpose of the course is to develop specific skills for the trainees for their jobs. The following main skills seem to be the most important in extension work:

1. How to approach and motivate people:

   i) Skill in conducting effective demonstrations.
   ii) Addressing meetings and conducting group discussions among farmers, progressive farmers, panchayat members, local leaders etc.
   iii) The effective use of audio-visual aids.
   iv) Individual contacts and farm visits.
   v) Group methods.

2. Techniques of bringing about a social change:

   i) The process of dissemination of ideas.
   ii) Acceptance and rejection of ideas.
   iii) The study of the process of change.

3. Skill at mass approach:

   i) How to conduct melas, exhibitions and dramas etc?
   ii) Rabi and kharif campaigns.
   iii) Propagation of new ideas - publicity.

4. How to formulate and execute effective plans:

   i) Farm production plan.
   ii) Village agricultural production plan.
   iii) Block agricultural production plan.
   iv) To conduct surveys and analyse situation.

5. Skill in evaluation:

   i) Specific village improvement programmes.
   ii) Response of the people.
   iii) Village Level Workers' performance.
   iv) Follow-up.

SYLLABUS

I. Extension Education Process and its role in rural development:

1. Philosophy and principles of Extension - meaning and scope of extension - basic concepts - development of indivudual and family - Extension is education in action.

2. Professional competence of extension workers.

3. How farmers accept new ideas - principles of diffusion - adoption process, adopter categories - their characteristics. Utility in Extension.

4. Meaning of community development - definition, ideology and principles.

5. Objectives and methods of community development understanding the community - its needs - change in attitudes - self help.

6. Critical analysis of community development programme by various bodies - Balwant Rai Mehta Committee, United Nations Team, Development Commissioners Conference - Ford Foundation, and others.

7. Current problems in Extension education affecting agricultural production.

II. Extension Programme Planning:

1. Problem oriented approach in agricultural extension programme.

2. Programme planning - definition - principles and procedure - analysis of the situation - objectives - teaching - content and method - evaluation and re-consideration.

3. Village agricultural production plan - collection of data, problems, solutions, plan of work, follow-up, evaluation.

4. People's participantion in programme planning - ways and means of involving the people.

5. Role of extension workers in Panchayati Raj.

6. Programme evaluation Organisation - its structure, objectives, method of evaluation - appraisal of its work.

7. Rural youth clubs. Their role in agricultural production.

III. Extension Teaching methods and Communication Process:

1. Applicable principles of learning and motivation.
2. Adult learner - characteristics -developmental needs of adults, growth and decline of learning abilities, application in extension.

3. Effective techniques of oral communication.

4. Extension teaching methods, characteristics of Extension methods, selection and use.

5. Process of communication in teaching - nature and importance of communication, key elements of communication.

6. Persuasion - definition, nature and methods of persuasion, logical and emotional support.

7. How to conduct method demonstration? Definition importance, steps and problems.

8. - - do - -

9. How to conduct result demonstrations? Meaning significance, steps and limitations.

10. Psychological basis of audio-visual materials - their role in communication.

11. Audio-visual materials in extension teaching - significance of audio-visual communication in increasing agricultural production.

12. Various audio-visual materials - their advantages and limitations.

13. How to conduct melas and exhibitions and compaigns?

14. Traditional media of communication, their place in bringing about a change to adopt improved practices in agriculture.

15. Meaning and significance of guidance and counselling - basic principles - role of extension officer as a guide.

Communication Workshop

16. Models - objectives and methods of use.

17. Flashcards - importance in communication.

18. Flannelgraphs - a practical technique for rural conditions.

19. Posters - their purpose & scope.

20. Charts - their effective use in communication.

21. Puppets - types and use.

IV. Rural Sociology:

1. Rural sociology, its structure characteristics and problems.

2. Leadership, its role ,solution and training for extension programme.

3. Social change and the role of extension workers.

4. --- do ---

5. Case study - meaning and how to write a case study.

6. Evaluation - meaning and methods.

7. Group methods and their importance in extension teaching process.

8. Large group discussion and small group discussion methods.

9. Panel, symposium, forum, role play, seminar & workshops.

10. How to lead a group discussion? Role of a leader in discussion.

V. Agricultural Economics and Farm Planning:

1. Steps involved in social survey - planning a survey, collection of data, analysing the facts and presenting the findings.

2. Methods used in social survey- observation, sampling, interview, schedule and questionnaire.

3. Farm Management - definition, principles and objectives, selection of a farm and selection of enterprises.

4. Fundamentals of farm planning - definition, principles, methods characteristics and use in Extension teaching process.

5. The farm planning process - resources, strong & weak points, analysis, alternative plan, production requirements and comparison.

6. Intensive Agricultural District programme, origin objectives, content, administration, supplies & financial implications, progress.

7. - - -do- - -

8. Service Cooperatives- their role in Farm Planning, functions, financial resources, marketing and loan repayment, programme in the Third Plan.

9. Cooperative Farming - concept, types and growth in India - its influence on agricultural production, Third plan targets.

10. Cooperative Marketing of Farm produce, advantages, working and progress. Third plan targets.

11. Population problem in relation to food production. Reasons to have more food production in light of present rate of growth in the population.

VI. Home Science:

1. Role of women in increasing agricultural production.

2. Balanced diet - importance of milk, eggs and meat in balanced diet.

3. What is home science and how can it help in agricultural programme.

4. Applied Nutrition Programme and UNICEF Projects.

Brief analysis of the treatment of the syllabus:

I. Talks-cum- discussions. - 40 periods

II. Village practicals . - six days.

a) Group assignments:

1) A few problems for oral communication.
2) Organisation of a small exhibition or mela.
3) Organisation of a campaign making use of local talent like dramas, puppetry etc.
4) Preparation of a village newspaper.
5) Organisation of radio listening groups.
6) Organisation of film shows and to study the reactions of the villagers.
7) Preparation of village agricultural production plan.

b) Individual assignments:

1) Preparation of farm production plans.
2) Case studies.
3) To layout field demonstrations.

III. Practicals on the campus: - 40 periods.

1) Preparation of plans for practical (method demonstrations, oral communication plans for surve, etc.)
2) Exercises in laying out demonstrations by trainees.
3) Exercises in oral communication individual assignments.

Communication Seminar - 3 days

Group projects:

a) Preparation of graphic materials from cheap available materials.
b) Preparation of teaching materials for field conditions.
c) Practice in group methods.

IV. Guidance and counselling by the staff. -)) 24 periods

V. Library assignments. -)

VI. Handling of simple audio-visual equipment - extra periods.

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LECTURE NOTES

While preparing the syllabus for the Agricultural Extension Officers attention was given to reducing the number of talks to a minimum. In view of the limited time available the lecture-cum-discussions have been reduced to about 40 to 45. In the following pages will be found some of the lecture notes given by the members of the teaching staff. It is hoped that these notes will be of help to the participants in their work.

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PRINCIPLES OF EXTENSION EDUCATION:

Badri Singh.

A few definitions:

Education: is the production - of changes in human behaviour.

Teaching: is a process of guided interaction between the teacher, the student and the materials of instruction. Teaching is directing the learning process.

Learning: is the process by which one, through his own activity, becomes changed in behaviour. It is the modification of behaviour through experience and training. Learning is the acquisition of new behaviour patterns, or the strengthening or weakening of old behaviour patterns, as the result of practice.

Motivation: is the direction and regulation of behaviour toward a goal.

A need: is the lack of something which, if present, would tend to further the welfare of the organism, or to facilitate its usual behaviour.

The process of getting the subject-matter from research and educational centres, and specialists into the minds and actions of village people is extension education. The process is that of education. It needs effective teachers or extension workers who know what to teach and the skill to teach it.

Helping people to gradually replace their tradition bound practices by practices based on scientific research and extensive trials, is the function of extension. Providing the necessary conditions for the people to adopt new practices based on scientific research is the responsibility of the extension organisation. This would mean presenting the knowledge about improved practices and convincing the villagers of the benefits of these practices, through the use of educational methods and not by coercion or pressure. But the responsibility to make choices and to take decisions should rest with the people themselves. It is this primary emphasis on education in extension that has given rise to the use of the phrase 'Extension Education.'

Principles:

I. The programme should be based on conditions that exist (village, block, district and national).

It means personal contact with, and thorough observance of, the environment, the people, the social structures, the economic status, the habits, the traditions and the attitudes; in fact, everything about the area in which the job is to be done.

The action should be related to the available resources of the community. It should be achievable considering such factors as personnel, finances, time and facilities. It should be oriented to the existing technical, economic and social level of the rural people. It should fit in with the local resources in soils, manures, irrigational facilities, availability of improved seeds, type of implements used and the cultivation practices.

II. Activities undertaken must correspond to the basic needs of the people:

People are motivated to learn if they can satisfy a basic need through learning. Basic needs or desires have been classified as follows:

1. The desire for security - economic and social security. Some programmes in the sphere of agricultural extension, such as some new seeds and improved implements, are accepted for their visible economic advantage. The items of land reforms are welcomed by the people because of the considerations of social and economic security.

2. The desire for new experience - adventure, new interests, new ideas, new friends, and new ways of doing things. Several items of the programme are tried out of curiosity ; some others are enthusiastically adopted because they are so novel. The people are motivated to accept some ideas in a spirit of compliance to the wishes of the extension workers in order to maintain friendly relations.

3. The desire for recognition - status, prestige, achievement and being looked up to. Cooperation with the programme opens up the possibility for some individuals to acquire a position of leadership in the village. Adoption of progressive ideas or ownership of a soil-turning plough, or a tractor or an orchard adds to the prestige of the family. Construction of irrigation wells adds to the prestige of the village.

It becomes the job of the extension worker to understand the basic wants of the people with whom he is working. The need for a larger income may be the incentive to the farmer to learn improved practices in agriculture.

Under voluntary conditions of participation, people concern themselves with programme of change only when they think that the programme is valuable to them in meeting personal, family, group or community needs which they themselves recognise.

Needs are classified into two groups, i.e. felt or consciously recognised needs and unfelt or unrecognised needs. All needs must become felt before they serve as motivating forces. Adults often are not aware of many of their most important needs.

One of the problems for extension workers is to help people identify important needs they do not recognise, then plan educational effort to convert these into felt needs.

Needs of farmers:

1. Successfully established in farming.
2. Increasing and profitable farm production.
3. Achieving social and civic responsibility.
4. Maintaining an economic standard of living.
5. Rearing children and assisting teen-age children to become responsible and happy adults.
6. Finding a congenial social group.

III - The farmers should have clear objectives:

No one either as an individual or as a member of a group, can act to the best purpose until he has definitely decided what he wants to do. The importance of clarifying objectives is found in two major truths:

1. The subject-matter and method necessary to attain educational ends can be wisely selected only when the objectives are specific and clearly stated.

2. Evidence of the effectiveness of extension activities can be collected only in the light of specific and clearly defined objectives.

The first step in economical learning is to establish the goal as clearly and explicitly as possible. In the process of seeking the desirable goals, behaviour changes take place.

Considering the farmers, the objectives for the application of fertilisers to paddy crop will be as follows:

1. Knowledge to be learned:

   a) How plants take in nutrients.
   b) What are the necessary plant nutrients?
   c) The limiting nutrients in the region.
   d) How nitrogen is related to paddy production.
   e) Relation of cost to yield and profit.
   f) Where to find reliable information on fertilisers.

2. Attitudes to be developed.

   a) The desire to produce a good yield of paddy.
   b) The feeling that it is profitable to apply fertilisers to paddy.
   c) Pride in applying fertilisers to paddy.

3. Skills to be acquired.

   a) To determine the kind and amount of fertilisers to apply.
   b) To buy fertilisers intelligently.
   c) To apply the fertilisers (method of applying).

IV. <u>People's participation in actions that promote their welfare:</u>

Learning is more rapid and efficient when the learner is a participant rather than simply a spectator.

The best way to learn is by doing. When a person does something or says something in his own words it is much more likely to become a part of him than if he watches someone else do it or hears someone else say it.

Involvement of people in all the activities of extension means involvement in planning programme, determining objectives, setting up plan of work, carrying on actions, and evaluating results. People may need to be encouraged and educated to this kind of a role.

Each person must do his own learning, because no one else can learn for him. People develop skills, habits and the ability to solve problems through practice. What is practised is learned.

Continued practice is necessary for the retention of learning and for the development of habit. Few clear and intense actions may be enough to learn whereas a score of half-hearted repetitions may be relatively fruitless of learning.

Extension helps people to help themselves through participation. It is education for action, action by individuals in improving.

Their farm and home skills and management, their health and other individual needs, action by groups to improve such environmental economic and social factors as production, marketing, purchasing, soil conservation, recreation and the like.

V. The use of group process:

Group process refers to the procedures through which a group of individuals approaches, attacks, and solves a common problem. This implies an opportunity for free face-to-face discussion, leading to a consensus of decision and action. The goal of group work is group productivity, that is, getting something done which could not be done by a single individual.

The principles of effective group are:

1. A democratic atmosphere:- All members must feel free to voice an opinion, to suggest , to disagree without fear of being ridiculed or losing status.

In order to arrive at common decisions , a voluntary, spontaneious, cooperative effort is essential.

2. The discussion should be goal-directed. The group process is not a debate, but an attempt to clarify viewpoints.

3. Leadership is shared.

Kurt Lewin says, " It is easier to change the ideology and social practice of a small group handled together than of single individuals. Decision in a group setting seems to be effective even if the group is not a permanent organisation. Group decisions prove to be superior to individual treatment as a means of changing social conduct."

D.Sanderson says, " We must recognise that social progress comes through changing group attitudes and that groups rather than individuals conserve and transmit new social procedures and mechanisms."

In planning for change, a trainer or leader may need to arrange the group environment so that differences are present in the area in which change and growth are desired. A leader may invite resource people into the group to provide some of the differences.

In the free and open exchange of ideas and feelings between the members of the group, no one needs to be competitive, no one has to win or prove himself right, no one has to be exposed to ridicule or condemnation. Together the members explore ideas or situations, test their insights old and new, through the combined contributions and helpful criticisms of all the members and the leader.

VI. The Problem - oriented approach in extension Programme:

Thinking is a determined course of ideas initiated by a problem and leading to a solution.

A problem situation arises when progress towards the goal is blocked in some way and when available practices are not adequate to permit the individual or group to surmount the obstacle and proceed toward the objective. The essential factors in a problem situation are therefore a goal, an obstacle, and inadequacy of current practices. These are essential conditions for thinking.

Thinking is the most important goal of education. Teaching learners to think means first of all providing problem situations. Training to think well in any given field or subject, say agriculture, is one of the desired results of instruction in it.

Advantages :

1. It tends to organise the facts appropriate to the solution of the problem.

2. Since problem solving calls for thinking of the possibilities and alternatives, it contributes to the development of open-mindedness.

3. Problem solving lends itself to learner participation in all its phases or aspects.

4. The many variations in kinds of problems and methods of solving them give rich opportunity for flexibility in teaching procedure.

Group thinking :

1. The group typically brings a broader background of experience to a problem situation than does any single individual.

2. The group is likely to produce more and varied suggestions for dealing with a problem than will arise from a single individual.

3. As diversity of background and interest within the group becomes greater, it becomes increasingly difficult to reach a real agreement among the members of the group as to the definition of the problem and suggestions for solution.

4. Interstimulation is a distinctive feature of a group effort. The suggestion by X, which is criticized by Y, serves as the stimulus to Z for a new and perhaps quite different suggestion.

It is education that participation builds the individual mentally to exercise effectively his own thinking, judgment, and leadership in solving his own problems and in cooperation with others, to solve group problems.

It is education that stimulates farm people to analyse and recognise their own problems and to take steps to solve them individually and collectively. Extension workers and outside agencies can only provide the necessary conditions for the villagers to recognise their problems, to learn how to solve these problems, and then to apply the extension methods to their own local situations. It is this capacity to recognize the problems, to take decisions and to choose the methods through which to solve their problems, which the extension education is aiming to develop in the villagers.

VII. <u>Learning should be related to and should make use of the learners experience:-</u>

Adult farmers have more experiences, different kinds of experiences and are organised differently.

The most precious element the adult farmer brings to a learning situation is experience. In the lifelong process, they acquire knowledge, skill and habits. They are capable of changing their ways of thinking and doing, because every farmer is a cumulative, dynamic integration of experiences.

The presentation of ideas and knowledge, if it is to be meaningful to the farmers, should be adopted to their level of experience. It means relating and applying the principles being taught to the kinds of experiences represented in the group.

Adults learn by associating a new experience to a past experience - by relating the unknown to the known. The members of any adult group will possess a quantity of varied experiences that can be used for the common benefit of the entire group.

Farmers have the tendency to fuse the new ideas with previous experience, thus acquiring new or clearer understandings, broadened interests, rational attitudes, improved patterns of thinking and behaving, and richer and more stable personalities.

VIII. Use a variety of learning activities or experiences:

This is based on the principle of multisensory approach. Messages reach the human mind through the senses, namely, seeing, hearing, feeling tasting and smelling . The greater the number of sensory channels used in the learning process, the greater is the actual amount of learning.

A number of teaching devices should be used to promote learning. For example, new variety of sugarcane is to be introduced in a community. The extension workers should arrange the personal approach, group discussion, result demonstration, film shows, tours and use of visual aids.

Good teaching tries to reach any learner through as many avenues to the human mind as can be employed. A good teacher is skillful in using all teaching methods, varying them according to the requirements of the situation and the needs of the farmers. This helps to maintain interest, stimulate participation, and meet individual differences.

Learning involves appropriate activities that engage a maximum number of senses. Learning results through self-activity and activities appropriate to the specific learning situation must be used.

IX. Providing for individual differences:

Individuals differ in interests, abilities, attitudes, appreciations and understandings, habits and skills and in capacity to learn.

Learning ability varies widely among individuals. The level of communication and the level of understandability of the subject-matter taught must be in line with the learners' ability, not only to understand what is taught, but to apply it to his problems.

Farmers differ in age, education, economic status, social status and proneness towards change.

Adults learn as well as youths, but a little more slowly. Reasons are 1) less actuo vision and hearing.

2) Slower reaction time.
3) Greater reluctance to learn, and increased fear of failure.

The extension teaching will have to be devised accordingly.

Because of less actute vision and hearing of adults.

a) See that people are comfortable, can see what is done and can hear what is said.

b) Printed material should be in large enough type to be easily read.

c) Use simple, well chosen words that are clear and meaningful.

d) Speak distinctly and slowly.

Because of slower reaction time of adults:

a) Teach one thing at a time in logical sequence, first the why , then the what, the how and the when.

b) Repeat often.

c) Give specific assignments that people can do.

Because of greater reluctance of adults.

To learn and their fear of failure:

a) Continually ask for and use the practical experience of farmers.

b) Give opportunity in meetings for their actual participation in discussion.

c) Provide recognition. Give them help and encouragement, commend their initiative.

d) See that they get satisfaction from their work.

e) Employ every possible pictorial device to show relationship of ideas and materials.

The farmers differ in their ability to apply recommendation . The problem is to select the content of the teaching and make it so attractive that such differences are transcended and common interests and needs are brought into focus.

Widely varied types of learning experiences should be provided, adaptable to levels of maturity, to different interests, abilities and so forth. Learning takesplace at different rates of speed for different learners.

The agricultural extension officers or village level workers are different in their:

1. Knowledge - about people, farming, the extension service.

2. Attitude towards people and things.

3. Interests - in people, sports.

4. Skills - in doing things with hands and directing others.

5. Past experiences.

6. Conditions of health, vigour, endurance.

7. Goals - ambitions in work and living.

8. Habits - developed through repetition over many years. We all resist change from our established habit patterns.

X. <u>Identification, Training and use of progressive farmers</u>:

This is basic in any programme. The people trust and have confidence in the progressive farmers as they belong to the same social and economic situation and come from the same area.

There is more likelihood of an improved practice being adopted by the farmers if it is introduced through progressive farmers rather than through the extension worker.

The need for training local leaders has been realised. They should be trained in the following aspects:

1. Understanding of the development programme.

2. Leadership requirements and functions in the farmers groups.

3. Orientation to the methods of work.

4. The principles and objectives of extension education.

5. Ways of mobilising people and getting people's participation in programmes.

6. Evaluation methods.

XI. Extension workers should be professionally competent:

In order that the extension workers may perform skillfully the professional tasks before them, they need the following abilities:

1. Thorough knowledge of the subject-matter.

2. Understanding the extension service.

3. Human relations.

4. The ability to plan.

5. The ability to organize people and things.

6. Relating principle and practice.

7. Counselling.

8. Working with local leaders.

9. Arranging learning situations.

10. Ability to communicate.

11. Evaluation of extension programme.

XII. Human relations:

The cultivation of an atmosphere of understanding between the extension workers and the people is essential.

Understanding of the principles of human relations is the essential basis for effective analysis of behaviour and conduct of educational programmes designed to foster more effective behaviour.

Qualities of character essential for good human relations are sincerity, personal integrity, humility, courtesy, wisdom, and charity.

Human relations has to do with how people get along with one another. Since their job is to bring about changes in people extension workers have to discover how to get people to act in ways they want them to, or else change their goals to those desired by people. One may know the technical answer, but unless he also knows how to work with people he would not know to get technical answers translated into better farm practices.

Failure usually is related to one's inability to get along with people.

XIII. Competition as a means of motivations:

People are often spurred to adopt new ideas by the motivation of competition. This may be observed between individuals, between groups, and between villages. Competition may be thought of as a basic ingredient in the prestige motivation, since successful competition usually leads to greater prestige for the winner.

In the developmental programmes, the importance of competition has been widely recognised and efforts have been made to utilise this motivation in bringing change, for example, in crop competitions, cattle shows, youth club projects and so on.

XIV. Extension programmes need to be flexible:

Extension programmes are peoples programme. All the people concerned cannot be involved at the same time to start with, nor all the facts of the situation and views considered once for all. It takes time for some people to come in; and as they come in, participate and grow in their experience, their views, may become more nature, their ambitions may become more realistic. In such a situation there should be scope for slightly modifying the programmes based on the people's experience and as a result of which they feel certain adjustments in the programme need to be made to reach the goal quicker or to increase the efficiency of their work or to achieve better results.

The particular items will need to be changed to meet unforeseen contigencies or emergencies. Without flexibility the programme may not in fact meet the needs of the people.

XV. Extension should be supported and backed up by technical experts, agencies and departments:

Extension pro-supposes knowledge to extend.

This knowledge is about improved practices based on scientific research and experimentation. The frontline extension workers like gramsevaks working with the people are to be informed of all aspects of rural life.

It is necessary that there should be well organised research programmes, and a band of technical subject matter specialists to keep the field extension workers continuously informed about the latest developments in subject - matter fields, and also the skills which are necessary for the extension workers to work with the people. The extension worker's effectiveness depends on his knowledge of improved practices and his skills of working with the people, and the responsibility of equipping the field extension workers with these should be squarely on the technical specialists.

XVI. Knowledge of success and failure:

The learner in a programme of adult education does not make much progress unless he knows in what respects he is succeeding and in what respects he is failing. A knowledge of his successes and failures should result in a challenge to the learner rather than in discouraging him.

Reward is a more effective stimulus to learning than punishment: Knowledge of results is necessary for an awareness of success and failure. It enables the learner to know whether he is right or wrong.

Short-term programme in farm production may be taken so as to give quick results and impart confidence among the farmers and extension workers. If a farmers observes that he is becoming more effective in areas in which he desires to become proficient, he will be motivated by his own desires for self-improvement.

The people learn best when there is some reward for learning, in terms of needs satisfied or a general feeling of accomplishment. Things learned which produce satisfying action tend to be repeated. The farmer who obtains a larger yield of maize by sowing hybrid is likly to continue this practice. Satisfaction from one learning experience stimulates interest in other improvements.

It is frequently necessary for the extension worker to help the learner to see that he is moving toward the desired goal and to help him recognize and appreciate the progress that he is making.

XVII. Learning must result in functional under-standing:

Memorization alone is temporary unless reviewed or put to use in a practical situation. Activities that characterise use situations are most effective. The content should be organised into meaningful units.

Understanding a thing consists largely in seeing why it is true. Nothing is really known unless it is understood.- Ability to apply or use knowledge in new situations depends largely on how well it is understood.

Useful learning requires that students not only acquire new facts and ideas, but also understand how to apply them in realistic situations. Subject-matter is useful only when it is understood and contributes to the attainment of a chosen objective.

To gain a functional understanding of technology requires knowledge of the whole, recognition of the parts and ability to see distinctions among the parts of related knowledge. For example, to be successful in the use of fertiliser in his wheat field, a cultivator must not only know that it is a good practice, but also the formula and the amount to be applied and when and how to apply it. Learners, therefore ,must identify the connection of ideas with each other and with the problems.

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REFERENCES:

1. Extension in Planned Social Change. B. Rudramoorthy. Allied Pulishers Private Ltd. Bombay 1964. Chapter 10. Pages 115-129

2. Teaching Agriculture, C. Hammods. Mc Graw-Hill Book Company, New York. 1950. Chapters 2, 3 & 5.

3. Cooperative Extension Work L.D. Kelsey and C.C. Hearne. Comstock Publishing Associates, Ithaca, New York. 1963. Chapter XVI.

4. Informal Adult Education. M.S.Knowles.
Association Press, New York 1951.
Ch: III.

5. Methods in Adult Education. B.Morgan and
Associates. The Interstate. Printers
and Publishers,
Danville, Illinois, 1960, Chapter 2.

6. A Collection of Principles and Guides.
Comparative Extension Publication Number (4)
New York. State College of Agriculture
at Cornell University , June,1958.

7. Developing Professional Leadership in
Extension Education Comparative Extension
Publication. Number (3) New York.
State College of Agriculture at
Cornell University , May 1958.

8. Extension Teaching Methods. M.C. Wilson and
G.Gallup. Extension Service Circular
495, August 1955. Federal Extension Service
U.S.Department of Agriculture,
Pages 5-7.

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IMPORTANCE OF RESULT DEMONSTRATIONS IN AGRICULTURAL EXTENSION - HOW TO CONDUCT THEM

Khushi Ram

The chief job of an Agricultural Extension Worker is to educate the farmers and persuade them to adopt new and improved methods of farming. For this purpose, he has to use a number of Extension Methods to contact the farmers and influence them to make changes in their behaviour patterns.

It is important for the Extension Worker to know all the Extension Methods and know their relative effectiveness.

Extension Methods which reach a large number of farmers or the so called mass media include news stories, circular letters, leaflets, bulletins, posters, radio, exhibitions, films and television. Methods that reach groups, include general meetings, Extension Schools, Study Courses and meetings at Result Demonstrations. The personal contact methods are farm and home visits, office cells, correspondence, telephone calls and Result Demonstrations.

Result Demonstration is the most important method to contact and influence the farmers. Result demonstration is conducted with one farmer and is a very important individual contact method. Meetings are arranged by the Extension Worker to show the difference between an improved practice over the unimproved one. Thus such meetings influence the groups. New stories are made out of the results of the demonstration, photos taken and films made. Charts and posters made and the results of the demonstration are utilised for making mass media. All this shows the importance of Result Demonstration in educating the farmers.

A study about the effectiveness of different Extension Methods in the Nilokheri Block was made. This study showed that Result Demonstration alone influences 14.30 per cent of families to adopt new practices. It is, therefore, very essential for the Extension Worker to know all details about Result Demonstration and the different steps to conduct a successful Result Demonstration.

What is a Result Demonstration:

A result demonstration is a method of teaching people the value of an improved practice. The teaching is done by showing them the results of the improved and unimproved practices under

local conditions so that they may see and judge for themselves. This establishes confidence among the farmers.

A result demonstration must be under the direct supervision of the Extension Worker. It must be seen by people. The Extension Worker must keep records.

Planning the demonstration by the Extension Worker (Steps in logical sequence).

1. Analyse problems and situation from teaching stand point:-

Needed practice to be demonstrated. Select the right practice.

2. Decide on specific purpose of demonstration:-

Whether demonstration is needed to give local people confidence in this practice and in the Extension Worker, or show practical application of scientific information or the extension worker wants to have confidence in all details.

3. Plan the Demonstration:-

Draw up plan on paper. Determine number of demonstration, locate sources of material. Plan kinds of records to be taken. (See proforma attached).

4. Select the demonstrator:-

Select the farmer who has need and desire for the demonstration. He should be cooperative and conscious of community responsibility. He should be dependable and willing to allow people to see demonstration. He must have equipment, time and facilities. Location of the demonstration is very important. It should be at a place where more people can see it. It is, therefore, essential to select a farmer who has his field near the road, canal bank or near the village. The farmer should not be the best and not the worst. If a farmer is already getting very high yields, the results of the demonstration with him may not create confidence in the people. If a farmer is getting very low yields, the results with him will also not create much of confidence amongst others. It is, therefore, desirable to select an average but progressive and cooperative farmer.

5. Starting the demonstration:-

Visit demonstrator and plan with him. Give publicity as it is better to have other farmers to see the demonstration from the very beginning. Demonstrate one practice at a time and start the demonstration.

6. Supervising the demonstration -followup.

Visit frequently enough to see that the plan is being carried out. Put up sign board and labels. Answer questions, if any, put by the demonstrator or other farmers. See that the records are kept. Organise sight seeing tours to the demonstration.

7. Complete the demonstration:-

Hold meetings and let the villagers see harvesting, winnowing, thrashing or other operations. Let them measure results and judge for themselves the value of the improved practice. As many villagers as possible should be present at this stage. This will dispose all doubts as to the actual result of the new practice. Publicise results.

8. Utilise results:-

Use results in reports, news items, articles etc, for teaching other cultivators. Prepare visual aids - pictures, tables, charts, specimen, samples, posters etc, for exhibition and use in meetings.

9. Exhibition:-

Evaluate the influence by demands for improved seeds, fertilizers, implements, insecticides, weedicides etc. If there is more demand, the demonstration has educated the farmers to adopt these new practices.

10. Applicability to subject-matter:-

Although result demonstration is a very important teaching method yet its scope is limited to certain subjects only. Subject matter in Agronomy, Horticulture, Plant pathology, Entomology, Forestery, Soil Conservation are more suited as compared to marketing, nutrition, clothing, livestock etc.

11. Relative influence and cost:-

Cost is high for those who see only and are not influenced but low for people as a whole when compared with other methods. It is very valuable for introducing new practice. Results made use of in other teaching methods. In fact, it is the most important and the only method to introduce new practices.

RESULT DEMONSTRATION PLAN

Topic: Demonstration of H.P.718Vs: Local Wheat.

1.	Objective.	1. To introduce wheat N.P.718 variety. 2. To increase yield. 3. To earn more money.
2.	Location for site.	At the crossing of the G.T. Road in village Butana in the field of Shri Mohan Singh - khasra No.7056/2 near well.
3.	Demonstrator.	Shri Mohan Singh.
4.	Design.	Two plot design - total area = ¼ acre.
5.	Equipment and material required.	Pair of bullocks. Drill. Rope. Seed - local and NP718. Ridge maker.
6.	Participants.	Shri Mohan Singh. Gram Sahayak. Panchayat members. Village Level Worker. Agricultural Extension Officer.
7.	Extension education methods employed.	1. Film Projector. 2. Film strip. 3. Charts. 4. Photos. 5. Flash cards.
8.	Tentative plans of meetings to be held.	Work to be done and visits.

Date.	Place.	Time.	Purpose.	Participants.

Extension methods employed.

9. Execution:-	Details of agricultural operations to be done by the demonstrator.	
	Date.	Operation to be done.
10. No. of people participated and attended.		65.
11. Follow-up.		Objections from the people. Suggestions for improvement.
12. Evaluation.		Opinions.

EVALUATION

C.L.Gupta.

The term evaluation has been given a number of definitions by workers in rural extension, ' some of them are:

- a process which enables the administrator to describe the effects of his programme and thereby make progressive adjustments in order to reach his goal more effectively -1
- the process of systematically drawing upon experience as a means of making future efforts more effective -2
- comparison of the situation before and after a development programme has operated within it for a predetermined period-3
- as a process by which the values of an enterprise are ascertained or an analysis by which one is able to understand and appreciate the relative merits or deficiencies of persons, groups, programmes, situations, methods and processes. It is a method of determining how for an activity has progressed and how much further it should be carried to accomplish objectives - 4

A simpler definition is given by Moe - 5,
- It is the determination of the value of or utility of a programme, an activity or a procedure in relation to its objectives and the situation in which it is developed. For our purpose the definition of evaluation will be; 6
evaluation is the measuring of the progress in attaining objectives and balancing the value of this progress against the effort involved in achieving it."

Objectives of evaluation:

1. To provide a periodic test which gives direction to continued improvement of work.

2. To help determine the degree to which the important purposes and specific objectives are being attained and, in the process, to keep clarify these objectives.

3. To furnish data regarding the rural situation essential to program planning.

4. To serve as a check on extension teaching methods.

5. To provide evidence of the value of the program.

6. To give satisfaction to cooperators and leaders through an understanding and appreciation of what is accomplished. The ultimate objective of evaluation - improvement of extension work - applies to all kinds of evaluation activities.

Criteria for effective evaluation?

a) Perfomance of evaluation does not refer to an isolated task. The whole extension work should be permeated with the idea of evaluation itself.

b) Clearly defined objectives - Be specific.

c) Valid instruments of measurements. There must measure achievements in terms of criteria.

d) Objectivity - freedom from bias, prejudice, idio-syncrasies,

e) Reliability - Different people using same techniques with equal competence will arrive at the same results.

d) Practicability - resources available - time - money-men.

5. Accurate evidence of change - This may require two points of appraisal - an earlier and a later point.

Steps in evaluation:

1. Formulate overall objectives - formulate it into a few clear statements of what the program seeks.

- Raise the level of living -

2. Clarify objectives and divide them into intermediate and immediate objectives.

Increase crop yield - green manuring.

3. Identification of what is to be measured.

(That will indicate movement toward the objective of achievement of it).

Objective.	What is to be measured?
Programme of training in anti-malaria.	Increase in knowledge.

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Healthy children in village.	Increase in the weight of underweight children.

4. Develop techniques and methods of measuring accomplishments.

- eliminate subjective differences
- comparison with a standard.

5. Control group for comparison.

6. Adequate sampling procedure - collecting of data.

7. Analysis of data. It aims at answering two questions:

a) What changes have taken place during the programme.

b) What portion of the changes can be attributed to the programme?

<u>References:-</u>

1. Jahoda and Barnit. The nature of evaluation - UNESCO International Social Science Bulletin. Vol. VII, No:3, 1955.

2. Beaglehole. Evaluation Techniques for Induced technological change. Ibid.

3. J.K. Mathews - What is evaluation? Extension Service Review, U.S.D.A., Washington, D.C.Siptember, 1955.

4. Kelsey, L.D. and C.M.Hearne. Cooperative Extension work, Ithaca, New York. 1955.P.218.

5. E.O.Moe. Outline for evaluation. Cornell Summer School, Cornell, New York. 1952.

6. Agricultural demonstration Hand book for Agricultural Advices, Paris, EPA, 1955, page 73.

7. Extension Education in Community Development Directorate of Extension, Ministry of Food & Agriculture, Government of India, New Delhi. Chapter XXIII.

8. Methods of Program planning in Rural Extension Education by J MA. Penders. 1956. Pages 303-320.

9. Elements of Extension Education process - by J.Paul Leagans. New Delhi. January.1960. Pages 151-167.

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FARM MANAGEMENT

H. Mahabaleshwariah.

Farming in the twentieth century is not the easy-going, carefree vocation that it appears to be from the outside. To be successful in the present-day farming requires a wide range of knowledge of the life and growth habits of plants and animals and the economics of agriculture and the business world.

Farm management is concerned with discussion of the many problems and procedures involved in acquiring, organising, and operating a farm.

According to Mr. Warren "Farm Management is the study of the business principles in farming. It may be defined as the Science of organisation and the management of the farm enterprise for the purpose of securing the greatest continous profit."

Farm Management is a continuous process:-

Farmer is both manager and worker in the field. In India most of the labour and Management used on farms is supplied by the farm family, usually the farm operator does most of the managing. Managing a farm is a continuous process of decision making. The technical knowledge used in managing farm may be regarded as the necessary raw material - the bricks and mortar - out of which or rather with the aid of which, the farmer fashions as economic farming unit and just as a satisfactory house can be constructed of any different shapes and sizes and with many different combinations of the raw materials, so there are many different ways of organising a farm as an economic unit. In organising a farm as an economic unit he has to take some time quick decisions. The need for decisions arises out of the necessity of adjusting farming operations to them. The principal changes with which farm manager must deal are as follows:-

1. Fluctuation in prices:-

Prices are constantly changing. Fluctuation in prices may be due to excess of production or some times due to artificial conditions. The seasonal price changes is very common in agriculture. To over come the ill effects of sudden price changes manager has to take decisions with respect to crops which he wants to raise.

2. Weather variations and diseases:

Due to sudden change in weather conditions farmer or manager has to take quick decisions in raising a particular crop. So also with respect to diseases. He should switch on immediately to disease resistant variety or change the rotation or change in total cropping pattern may have to be taken up depending upon the situation.

3. New Farming methods: -

Present day agriculture is characterised by rapid changes in farming methods and practices. When a new wheat variety or paddy variety is released, should you continue planting your present variety or change to the new variety? Should you buy a new sprayer to take advantage of new weed sprays? These are some of the decisions the farmer has to make in recent years concerning new farming methods.

4. Changes in the people and institutions with which farmers deal : -

Sometimes individuals on whom the farmer is dependent cause difficulties. Hired workers may become ill or disgruntted. People with whom the farmer deals may not live up to their commitments. Changes in government policy may force decisions on the farmer. For example, kharif campaign in the State may force the farmer in taking decisions.

Objectives of Farm Management: -

1. To make a living for farmer and his family.
2. To get the maximum returns in satisfactions and net profits from a minimum expenditure of resources and human efforts.
3. To meet national requirements in food and industrial raw materials.

Selection of a Farm:

A farm is both a place to make a living and a place to live. When selecting a farm keep both of these points in mind. Acquiring the use of a farm is the first step in the career of every farmer. In choosing a farm the individual should make a careful evaluation of the characteristics he wants in it.

Characteristics of a desirable Farm:

1. Fertility of land:

The fertility of the land is one of the most

important considerations. Crop yields on the farm in question should be estimated and should be compared with the yields of other farms with which the individual is familiar. If a soil survey map is available, it should be consulted to identify the soil types of the farm. The current condition of the soil should be studied. Has its fertility been depleted? If so, could it be built up again with a reasonable period of time and without too great expense?

If you consider building up run-down soil, note the kind of improvement it needs. Is the soil too open and sandy? Is it composed of clay, which puddles easily and is hard to work in wet seasons? Does it need hining ? Is it so defficient in organic matter that it will require liberal application of farm yard manure or green manure? Last and very important, what will it cost to restore the soil fertility?

2. Topography or the lay of the land:

The land should have natural drainage or a drainage system capable of carrying off excess rainfall before it damages the crops. Some fields which raise good crops in normal seasons become ponds in wet years. If a drainage system is necessary, its probable cost should be estimated before the farm in purchased.

At the other extreme is land too hilly and rough to be very unproductive. If the slope is too steep and the soil erodes easily, it will be necessary either to keep the rougher parts of the farms in permanent pasture or go to the trouble and expense of controlling erosion. Even with erosion control yield on the steeper hillsides are apt to be unsatisfactory and the expense of farming rough land is high.

Slopes may need to be terraced or contour farming followed. Terraching is expensive, to be and contour farming likewise increases the cost of operation.

3. Water supply:

Before buying a farm, the purchaser must consider the supply of water. First, is there a satisfactory supply of sanitary water for use of the family and for livestock? This may be furnished by a well or a spring, but the farmer must assure himself that such water willbe available the year round in adequate supply. If it

is necessary to dig or drill a well, how deep must it be? What would any needed improvements in the water supply cost.

In irrigated regions, the prospective farmer should make certain that satisfactory water rights go with the farm. The land may be useless unless an adequate supply of irrigation water is available through out the growing season. Where does this come from? How dependable is the supply? Is it important to make sure that there are no prior rights ahead of the farm in question so that it would be deprived of its irrigation in a dry season. What do water taxes amount to, and what obligations on irrigation bonds must this farm share with others of the district.

4. Improvements:

Even if the soil and topography are satisfactory, the farm still may not be a " good buy" if the improvements are inadequate or in poor condition. Buildings, fences, and a water supply are as necessary as land. If these are lacking or are in poor repair, how much would it cost to supply or repair them?

5. Weeds and stumps:

Before taking a farm, see if there are patches of trouble-some weeds or stumps or rocks that need to be removed.

6. Farm layout: -

A farm may be highly productive, yet have its buildings and fields so inconveniently located as to prevent efficient operation. How much will it take the desirable changes, cost and how long will it take to make them? If the farm is to be rented will the land lord agree to make them?

7. Location of farm and roads:

The distance from market and the kind of roads are very important. For some types of farming, such as the production of fluit, milk, it is necessary that a market town or shipping point be easily accessible. The buying of supplies and the social life of the family, as well as the marketing of farm produce are affected by these considerations.

8. Labour supply:

There should be sufficient number of labourers of desirable quality should be available as and when required.

9. The Community:

The kind of community in which the farm is located is an important factor. The amount of satisfaction derived from living on a particular farm depends largely upon the kind of neighbourhood and the presence of good schools and temples. Are the neighbours congenial? Are they progressive, and do they work together well? These questions are important both from a social and a business stand point. Many farm tasks can be best performed by co-operative labour, and industrious neighbour boy make the most desirable hired labour. In other ways also, such as the cooperative marketing of farm products, the individual farmer depends to a large extent upon his neighbours.

10. How large should the farm be:

The farmer's income will depend in large measure on the size of farm he operates. The acreage should be sufficient to keep him fully employed and to make full use of his capacity as a manager. Buying an eighty acre farm in a region where the most advantageious type of farming requires two hundred acres places the farmer under a heavy handicap from the beginning.

No simple formula for the best size can be given to fit every case. For one thing, risk increases with the size of the business, and the young farmer, who is just beginning , should be careful not to take unnecessary chances with his limited capital.

Selection of Enterprises:-

The selection of the enterprises comprising the farm business and the combination of these enterprises to organize the complete farm unit comprise an important managerial responsibility of any farmer. They involve the selection of the specific enterprises to be included, the combination of fitting together of the different crop and livestock projects, and adjustments in the enterprise choices and relative proportions during the operating season. The objective is to balance the farm business by providing the combination of enterprises and proportionate emphasis on each in order to obtain the greatest possible net returns for the year's work.

There are several types of farm enterprises, depending on the relative contributions to farm income, production of by-products and the like. The most important groups are (1) major cash enterprises, (2) supplementary enterprises, (3) complementary enterprises and (4) home-consumption enterprises.

Major cash Enterprises:

The major cash enterprises of the usual farm business are those projects which provide the most important source of cash income and on which a large share of the labour and capital available is applied.

The major cash enterprises should be selected according to the experience of the more successful farmers in the community, the capital and land available, and to a minor entent, according to the skills and knowledge of the farmer. The organization and operational practices on any farm should be based on and around the major cash enterprises or most profitable projects. To this ... extent, the farm must be specific.

Supplementary Enterprises:

A supplementary enterprise is a minor cash enterprise which does not compete to any great extent for land or resources needed by the major cash enterprises. Because there are few, if any major cash enterprises which fully utilize all the resources of the usual farm business throughout the year. Most farms have numerous opportunities for the addition of supplementary enterprises. The type of supplementary enterprise possibilities varies greatly according to systems of farming. In case of sugar cane farming vegetable growing can be taken up as supplementary enterprise.

Complementary Enterprises:

A complementary enterprise is one which contributes to the produductiveness of another. Such enterprises usually complement major or supplementary cash projects. They are maintained because they serve to make some other enterprise more productive. Complementary enterprises frequently produce some cash income but for the most part do not bring in sufficient cash returns to offset the costs of the enterprise. Legumes in rotation serve as an important complementary

enterprise on many farms. Livestock enterprises which are added to the farm business for the purpose of utilizing certain low-grade feeds which cannot be used other-wise is also complementary enterprise.

Home-consumption enterprises:

Home - consumption enterprises are those maintained primarily for their contribution to family living. The most important of this is the farm garden. Others are many farms with small poultry flocks kept for eggs and meant, the one or two milk cows maintained on many crop farms, a small orchard, a few hives of bees, and similar items.

The farm garden is usually cultivated by labour which would otherwise be idle and utilizes the regular power and equipment of the farm.

Consideration in the Selection of Enterprises:

There are certain basic factors which should be considered in the selection of enterprises and the combination of these enterprises to make up the operating farm unit. These factors will vary in relative importance according to the system of farming and the specific facilities and resource on a given farm. They include (1) labor distribution (2) Use of land (3) Use of by-products, (4) Maintenance of soil fertility (5) Relative risks (6) Distribution of income, and (7) efficiency in the use of work stock, machinery and buildings.

(1) Labour distribution: - The selection of enterprises should be such as to provide uniform distribution of labour throughout the year as far as possible. The periods of peak labour requirements generally fall at the sowing and harvesting times. Therefore the cropping schemes should be so adjusted as to provide as far as possible, full utilization of labour all the year round. But it does not mean that the uniform labour distribution should be accomplished at the expense of low profits.

(2) Use of land:- The use of land is adjusted to the relative importance of the enterprise in land. In a ten acre general farm, the allocation of crop land to fodder is only one acre for the maintenance of 1 pair of bullocks. If it is a mixed farm, additional 3 acres would be kept for the maintenance of 3 cows. In a purely dairy farm where the livestock enterprise is the major source of income, a major portion of the farm would be devoted to feed crops.

(3) Use of by-products:- In India the chief motive power in crop husbandry is provided by cattle. They depend, in a large measure on farm by-products like bhusa, jowar fodder, paddy-straw, oil cakes etc. The keeping of livestock helps in the distribution of labour and provides manure for crops.

(4) Maintenance of soil fertility:- This factor is of considerable importance in choosing the crops to be included in the farm business. This involves proper crop rotations. For example in a two year rotation we may have Groundnut and Jowar. For the maintenance of soil fertility the inclusion of live-stock enterprise cannot be ignored.

(5) Relative risks: - Unfavourable weather conditions and price fluctuations are two most important risks in farming. One crop business such as sugarcane enterprise may bring disaster to the manager due to sudden emergence of sugarcane insect pests or diseases. A combination of enterprises such as crop, dairy and poultry farmings could reduce the risk of unfavourable weather and price variations.

(6) Distribution income: Enterprise in the farm business should be selected in such a way that the income is distributed throughout the year. This would considerably help in the elimination of borrowing money to finance the farm business.

(7) Efficiency in the use of workstock, machinery and buildings:-

The enterprises selected should give a better use of bullocks implements and machinery for increasing the income of the farmers. Their better utilization reduces the overhead costs.

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" RURAL YOUTH CLUBS "

R.D. Kaushik.

A. Introduction:

In the concept of the Community Development programme of the country, the importance of rural youth organisations cannot be over emphasized. The youth should be so trained and organised as to participate in the total plan of village development.

Rural youth individually and in groups in the shape of club play a very dominent role in the activities which lead to increased agricultural production and community development. It is a great reserve of human talent ability. Youth are much more energetic, enthusiastic and receptive to accept new ideas and to work on new programme. They have great influence on their parents for accepting new and improved practices by demonstrating the practice at their own farm. The club if take up proper projects, can improve economic and social life by application of science and technology. Some of the aspects of Socio-cultural and Agro-economic are given below:-

a) Technological development:

Use of machinery in the field of agriculture, dairy, irrigation (tube well) and cottage industry can very profitably be taken up. At present our people are afraid of the words " Machinery" "Electricity" etc. In the 4th five year plan electricity will be installed in most of the villages. The people should be trained in proper care, prevention from shocks and fire.

b) Economic Development:

The items like laying out of scientific agricultural demonstrations, organising campaigns, use of improved practices, planning for their own farms and villages etc. can be taken up as economical projects. Cooperative farming as a cooperative project can also be exhibited in the village and a spirit can be developed amongst members for cooperative system of working.

c) Social development:

Community service can be rendered through different projects like

social, cultural and recreational activities .

Through rural youth clubs, the youth will have constructive use of their time and energy. Youths are future citizens and parents, if properly trained through these organisations, they shape the future generation of the country.

d) Political Development:

Sense of right and duty is developed. Leadership quality can be defused amongst members. They learn discipline and working of groups and governments at different levels.

B. Objectives of youth clubs:-

The youth clubs are specialised educational enterprise and has the following objectives:-

1) All round development of youth viz; physical, mental and moral development. Emphasis will be on development of individuals and not on materials and projects which are only the means to an end.

2) To help rural boys and girls to develop desirable values, ideas and standards for farming, family life, community life, citizenship, leadership and sence of responsibility.

3) To give youth technical education in farming and community leadership through training in practical and and profitable individual and group projects.

4) To train youth in cooperative action by practicing cooperation with others for community efforts for the common good in joint projects.

5) To develop such leadership qualities as self reliance, devotion to duty by giving group responsibilities through active club membership service on club committees, fairs, camps, competitions, tours, judging contests and holding club offices.

6) To develop scientific attitude towards the problem of the farm, home and community.

7) To utilize leisure hours through healthy persuits.

8) To sum up youth have to be developed into a first class citizens who know their rights and responsibilities and intellectually compete to lead successful adulthood.

C. Approach:

The programme should have a new approach which implies:-

1). Well conceived, well planned and well phased efforts should be made while taking up youth work. Complete faith in the utility and effectiveness of the programme is essential and there should be no sporadic efforts for running the programme.

2). Our main objective is to strengthen Indian democracy. It is all the youth of the village, school going or not has to find a place in the club and learn to become a better citizen. Our school going boys were mostly left out, but together with his knowledge of sciences, literature and other things he has to be developed as a whole.

3). We should be conscious of the theory of individual differences. There should be some " Must" programmes for every member of the club but mostly the programme should be according to the taste and abilities of the individual members.

4). Learning by doing should be the guiding principle.

D. How to organise a club?

The following steps may be useful as guiding outline.

1). Survey of the village on following points:

a) Number of youth.
b) How they utilise spare time.
c) Professions of the parents.
d) Parents idea regarding youth clubs.
e). Project that can be taken up profitably.
f) Resources of these projects.

2). <u>Approach to the villages with a living faith</u>:

a). Take them into confidence.

b). Tell villagers about role of youth clubs.

c). Make night hault and organise their cultural programme.

d). Locate willing and inspired youth.

e). Locate leaders also.

3). <u>Individual contacts with youth and parents</u>:

Give sufficient knowledge about the youth club activity and make them feel the necessity of organising a youth club in their village.

4). <u>General meeting of the interested persons and youths to be called by Surpanch</u>:

The president of the Gram Panchayat should preside. The attendance of the following persons is very necessary.

i) Parents and guardians.

ii) Prospective leaders.

iii) Members of Gram Panchayat.

iv) School teacher.

v) V.L.W. and Panchayat Secretary.

vi). B.D.O. and his technical experts.

It should be stressed here that the cooperation of parents is most essential. The objectives of the youth organisation should be made clear and a resolution should be passed that a club should be formed in this village. The names of willingly volunteering youths and adults and youth leaders should be noted.

5). <u>Second meeting</u>:

The youths and youth leaders should be present and the following agenda should be discussed.

i) Formation of executive committee.

ii) Explanation of duties of members, office bears and youth leader.

iii). Fixation of date for next meeting for preparing programme and projects.

iv). The projects should be explained and suitable literate distributed if available.

6). Third meeting :

Finalise the programme and allot projects.

7). Follow-up:

In order that the club should run successfully its close follow up is very necessary. The meetings of the club should be supervised and guided till they learn parliamentry procedure. Weekly visit to projects and constant guidance is necessary.

E. Projects and contents of the programme:

The project is defined as a practical activity in which member is engaged as individual or in group. The projects should carefully be planned and designed under the guidance of either adult leader or official of the block. Proper record of the project should be maintained. It is always advisable to have a simple beginning and proceed systematically on easier and smaller projects.

The following are some of the important points to be kept in mind while selecting projects.

1). Profitable: It should be better in quality and quantity and involve less money, energy and time.

2). Informative: It should introduce new practice, skill or method.

3). Supplies available: The material and specialised knowledge should be available in the locality.

4). Felt need: - Base the project on the real need. They should also be familiar to the locality to some extent and should be practical and realistic.

5). Result and sense of satisfaction:

The projects should result in monetary profit and also introduce a new practice. The project must meet the needs atleast to some extent and give him sense of satisfaction.

6). Service to community:

The projects taken up should be of advantage to the masses. Health and sanitation projects and Sharamdan should also find place.

F. Projects and their advantages in Development of Youth:

(1) Games:-

i) It develops spirit of cooperation.
ii) It develops spirit of oneness.
iii) It develops spirit of working in a team.
iv) It develops sportsman spirit and defeat has no meaning.
v) It develops spirit of helping each other.
vi) It provides exercise.
vii) Better utilization of spare time through games and provide recreation to self and others.
viii) The power of tolernance and Judgement is increased.

(2) Farming Projects:

i) Learn new and improved methods of farming.
ii) Demonstrate new practice to parents.
iii) Learn working with hands and dignity of labour.
iv) Strengthens Economic and Financial position of members and ultimately of parents. Earning while learning.
v) Fresh vegetable and fruits for home consumption without any expenditure.
vi) Help villagers in providing seedlings of flowers, vegetables and fruits by growing them in nursery by a cooperative project.
vii) Help bringing change in self and in other members of the Community.

(3) Meeting:-

i) Learn working of a Government procedure.
ii) Learn to adjust in group thinking and group working.
iii) Learn discipline and punctuality.
iv) Learn rights and duties and responsibilities.

v) Learn solving problems and decision making.

vi) Learn expressing of ideas and also listening other's point of views.

vii) Increase knowledge and understanding by participation in group discussions.

viii) Change in behaviour takes place.

ix) Leadership is developed.

(4) Cooperative Projects.(Group Work).

i) Spirit of cooperation develops.

ii) Spirit of sacrifice develops.

iii) Spirit of unselfishness develops.

iv) Help villagers by providing services and supplies.

v) Learn and demonstrate cooperative farming.

vi) Get more money for club.

(5) Community Projects:

i) Help self and others in health programme.

ii) Beautify our own houses and village as a whole.

iii) Help village mounting campaigns for more production and better life.

iv) Help in repair of roads and community building .

v) Motivate people for participation in common projects.

(6) Recreational Project:

i) Help in providing enjoyment in village community.

ii) Hidden tallents amongst the members is developed.

iii) Religions programmes can better be performed by local resources e.g. Ram Lila.

iv) Initiative is developed as they participate.

v) Village development programmes can be projected to people through recreational activity.

vi) Can earn through these programmes.

G. Constitution of the club:

Each club should have its own constitution in which its structure will be defined in detail. Duties and functions of the members and office bearers will be given. It should also indicate its objective, programmes, rules for admission, elections, general discipline rules. The constitution will give following information.

1) Name of club.

2) Objective of club.

3) The nature of membership and age limits of entrants.

4) Membership fee and finances of the club.

5) Minimum number of members that qualify the formation of club.

6) Meetings.

7) Election of office bearers and election procedure.

8) Functions of office bearers.

9) Pledges, flag, symbol, slogans etc.

10) Club meetings.

11) Festivals and functions.

12) Activities of the club.

H. Formalities:

Each club has its own formalities. The follow-ing are the suggestive ones.

a) Symbol: Each club should have a symbol of its own and it should express agriculture as well as intellectual pursuit of the youth.

b) Flag: Each club should have a flag of its own with the symbol in the centre.

c) Pledge: Each club must have a pledge preferably it may be adopted from state pledges. It should be taken at the time of admission and should also be repeated in club meetings.

d) Slogans: Each club should have a set of slogans which have a definite moto. These should be used at different functions and meetings.

e). Rituals: Some rituals should be observed at the time of admission and annual functions such as taking oath by standing, shaking hands while receiving prizes.

I. Functions, fairs and exhibitions:

The following functions should be arranged

1) Rallies: Rallies should be arranged at Block level and the following items should be attended to.

a) Community prayer.

b) Inter-club competitions for sports and cultural activities.

c) Lectures, group discussions on different subjects.

d) Exhibition depecting achievements of club and improved practices.

2). Annual day: Each club should celebrate its annual day and the following items should be taken up.

(a) Exhibition of the products of the pr jects.

This will give a chance to villagers, parents, and officials to have an idea what the club is doing.

(b) Sports and cultural programmes should be organised.

(c) Panchayat should give prizes to members who have done outstanding work.

J. Follow up of the projects:

This is the most vital phase and must be done carefully and continously. At present most of the clubs have failed due to lack of follow up work. An outline of follow up

programme is given below:-

1) The V.L.W. or any other extension staff must visit the project and guide the members. The staff should participate in the programme and maintain constant contact.

2) Trained local leaders must also visit and guide.

3) Guidence from the Block, District and above levels is very important.

4) Sports, cultural programmes and inter club activities should be encouraged besides productive and economical projects.

5) Timely and adequate supplies.

6) There should be meetings at short intervals to discuss the progress of projects and solve the problem.

7) Parents and other elders should be invited to visit the project and give suggestions. Panchayat should take active interest and watch progress.

8) Annual evaluation made and recognition should be given to youth by holding a function to award prizes, certificates etc.

9) Youth clubs should be encouraged to participate in village celebrations and they should be helped in planning and execution of the celebrations.

10) In village melas the projects and other youth work may be exhibited and judged on competitive basis.

11) There should be public recognition for outstanding projects and they should be given importance.

12) Joint projects give strength to the club and they need constant attention of extension staff.

13) The block team as a whole should feel keenly interested in the programme and in the projects of the club.

14) Clubs should be financed through official and non-official sources.

K. Incentives and recognitions:

Although youth has been recognised as the most potential section of the society who can respond to the need of our country in agricultural production and community development yet the programme of rural youth could not take its roots in the way it should have. One of the most important factor which has led to the success of rural youth programme in other countries is provision of proper recogmition and incentives to members for outstanding work. The rewards etc. inspire the youth to keep interest in the programme. There are various ways to recognise the club members, some of them are given below which will suit our conditions.

i) Organising competitions, rallies, exhibitions, melas and fairs:

All these activities can be organised at village level and above regularly. The members got an opportunity to show their produce, exchange experiences and discuss the problems. In competitions, the winners should be honoured appropriately. Inter-club activities are of great value.

ii) Study tours and visit to different places:

The moritorious members and who want to develop this activity may be taken to new places where they got an apportunity to learn things by seeing and doing themselves. Such trips will be very useful and will help in developing an uniform pattern of rural youth activity in India. Study tours not only add new knowledge, but also create desire to adopt improved techniques. Proper and careful planning is very necessary. Visiting places should be like Research stations, outstanding N.E.S. Blocks, farms of progressive cultivators, E.T.C., Service cooperatives and cooperative farms , cottage industries centre etc.

iii) Award of scholarship to moritorious and deserving club members:

This will develop a spirit in the school and college going youth to put in more

productive efforts in the project. The financial help to poor students in the form of scholarship or freeship will also help them to continue their studies.

iv) Reward in the shape of agricultural implements and material.

Rewards in kind will not only encourage and enthuse the members, but they will be of practical use in projects.

v) Providing radio set and material for socio-recreational activities:

The radio set will be helpful for the members to listen to the latest development in the country and the results of researches alongwith day to day developments in the world.

vi) Provision for training in various community development:

Suitable training in agriculture and cottage industries should be arranged by the block staff for desirous and deserving members.

vii) Association of outstanding members to Panchayat and cooperatives:

If good workers are associated in Panchayat and cooperatives, this will provide an opportunity for the members to build up right type of leadership to develop the village programme.

viii) Financial help for clubs:

Both official and non-official organisations should build up funds for club activity.

ix) Remember the name of a youth member and correspond when there is outstanding work done.

x) The D.P.O. or other high official of the department should entrust specific responsibility to outstanding member.

xi) Publication of case histories of outstanding achievements.

Recognising the members in this way, will create a spirit in them to feel that they belong to some organisation which has got its roots in other villages also.

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FARM PLANNING

H. Mahabaleshwariah

Farm planning is a procedure which helps the farmer to choose, plan for, and carry out the enterprises that will maximise his income and other satisfactions. It is a process of decision making and helps the farmer to become a better manger.

A farm production plan is a programme of the total farm activity of a farmer drawn up in advance. The process which can help farmers to move from traditional ways of farming to newer and more productive ways of farming is called farm planning. Indian farmer is not accustomed to write all the accounts and other happenings on the paper. He does not plan on the paper and plans the farm activities in his mind. It is likely in the present day activities which are numerous, he may forget certain important points which help him in taking constructive decisions. To make the farm business a success and to avoid risks one should plan the farm activities well in advance. The planned production helps the farmer to derive the following advantages:

1. It helps the farmer to know the structural and operational weaknesses.

2. Helps him to obtain required credit well in advance.

3. Helps him to adjust his income in such a way so as to get it regularly through out the year.

4. Helps him to use the labour force productively.

5. Helps him to use the machinery and implements fully.

6. Helps him to plan for marketing well in time.

7. Helps him to receive help from Extension Workers and technical workers since every thing is systematised on the Farm and Extension Workers will be ready to extend their help always in such cases.

The Farm planning technique is used for maximising profits. The possible combination of input and output relationships can be made to maximise the farm profits.

1. Out-put	-	Input	=	Net income.
2. Out-put Increase, increase	-	Input Increase	=	Net income Increase.
3. Out-put Increase	-	Input Constant	=	Net income Increase.
4. Out-put Increase	-	Input Decrease	=	Net income Increase
5. Out-put Constant	-	Input Decrease	=	Net income. Increase
6. Out-put Decrease	-	Input Decrease, decrease	=	Net income. Increase

Method:

Budgeting in Farm Planning:- A budget is usually a plan for future using or spending. A farm budget is a plan for future use of land, labour, equipment and other resources. It includes the plan for the system of farming for the coming year or period of years. It shows the livestock to be kept, and expenses from the various sources. The budget is the business like way to work out and record farm plan."

Types of budgeting:-

a. Complete budgeting:- It refers to making out a plan for the whole farm or for all decisions of an enterprise.

b. Partial budgeting:- It refers to estimating the out come or returns for a small part of the business, such as the poultry, or paddy or wheat or fertilizer application.

Characteristics of a Good farm plan.

1. It should have good land use programme;
2. It should have efficient livestock system on the farm.
3. It should use the labour to maximum extent.
4. It should have sound finance.
5. It should have good use of implements and machinery programme.
6. It should have balanced combination of resources.

7. It should have less risks involved.

8. The plan should be flexible.

9. It should take it into consideration the experiences of the farmer.

10. It should take it into consideration the price prospects.

11. It should consider the climatic, soil and topographic conditions.

12. It should consider the marketing facilities.

13. It should incorporate the use of up-to-date methods.

How to prepare a Farm Production Plan:

The following are the steps in preparing a Farm Production Plan.

1. Prepare a complete list of the Farm resources - inventory of the farm.

2. Find out the full information on how each resource is utilised and what are the out-puts obtained from various enterprises adopted on the farm.

3. Find out the wants and preferences of the farmer.

4. Identify the weakness of the farm practices with the help of the technical knowledge that you have.

5. Earlier keep ready the package of practices for each enterprise.

6. Work out the available alternatives for the use of farm resources.

7. Work out the extra requirement on the alternative plan.

8. Discuss the alternative plan with the farmer before suggesting final plan.

9. Work out the production requirements and probable extra income clearly and elaborately.

10. To begin with make only operational changes to prove the use of farm planning.

The Farm Production Plan may result in the following ways:

1. The proportion of area under different crops may change i.e. changing the cropping pattern.

2. It may result in the introduction of new varieties or crops and rotations.

3. It may result in the intensity of cropping.

4. It may result in the improvements of permanent nature like irrigation, drainage and other types of land improvements.

5. It may result in the adoption of technical improvements.

6. It may result in most profitable use of resources which are scarce.

7. It may result in changes in the number and quality of livestock.

8. It will result in improving the farmer's ability in planning, decision making and executing the plan.

The package of practices should be worked out well in advance for each crop and for each enterprise. This will give in one place all the improvements need to be taken up on the farm. It helps the farmer also to take quick decisions and helps him to make arrangements for the production requirements well in advance. The package of practices for two crops have been worked out for Nilokheri area and they are as follows:

Package of practices for Paddy.

1.	Seed variety -	Jhone 349/S.20. Basamati 370 or 217.
2.	Seed rate per acre -	10 Kg.
3.	Seed treatment -	25 gms. Agrosan
4.	Time of sowing -	May - In nursery. June - transplantation.
5.	Metthod of planting-	7" between lines. 6" to 9" between plants.

6. Interculture operations - 2 to 3 hoeing.

7. Manures and Fertilizers:

a. F.Y.M. - 15-20 tons.
b. C.A.N. - 2½ Mds or 100 Kg.
c. Superphosphate - 2½ Mds or 100 Kg.
d. Muriate of Potash - 20 Kg.

8. Plant protection measures - B.H.C. dusting.

9. Irrigation - 4 to 6.

10. Yield - Basmati - 35 Mds.
Jhona - 45 Mds.

11. Cost of produce - Jhona Rs.450.00
Basmati Rs.560.00

12. Extra expenditure - Jhona Rs. 77.39
-Basmati Rs.78.61

13. Net Profit - Jhona Rs.372.61
Basmati Rs.481.68

Package of Practices for Wheat Crop.

1. Seed - Improved strains - C.278.
2. Seed Rate - 30 Kgs. per acre by drilling.
3. Seed treatment - Solar treatment and seed dressing with Agrosan GN.
4. Sowing - a. Method - By drilling at 9" distance. Depth of sowing 1½" to 2".
b. Time - 15th October to 15th November.
Late sowing - upto 15th December.
5. Interculture - one hoeing when required.
6. Roguing of diseased plants. Spraying 2,4-D when the crop is6" in height.
7. Irrigation - Ist irrigation on one month after sowing. Subsequently 2 to 3 irrigations as and when necessary.
8. Manuring - 1. Basal dressing - 10 to15 cartloads of farm yard manure or green manuring with cluster beans(guar) @ 20 to 25 Kgs. per acre or sesbania.

2. 100 Kg Calcium Ammonium Nitrate.
50Kg superphosphate.
20 Kg. potash.

9. Expected yield - 30 Mds per acre.

THE CASE STUDY METHOD IN EXTENSION PROGRAMMES

Dr. H.W. Batt

Introduction:

The case study method is a technique that is particularly useful in getting a deep insight into the factors of a specific problem in Extension programmes. Through this method the inter-relationship of many factors can be carefully assessed over a period of time which may have contributed either to the success or failure of the programme. This method can be used to explore and analyse the life of a social unit : a person, a family, an institution, a cultural group, or even an entire community. The main principles of this method is to determine the factors that from the complex behaviour pattern of the unit, and the relationships of the unit to its surrounding situations. Relevant information can be collected exhaustively in case studies either for the entire life cycle or for a definite section of a unit, but always with the object of studying the problem through its source and its relationships to the social factors and forces involved in its environment. Although through this case method one has to study the variety of factorswithin a social unit it has to be an integrated whole.

The validity of the conclusions based on a single case is dependent upon careful observations and accurate evaluation of many factors. These studies require laborious exploration of a variety of data. Numerous instances would have to be examined in order to determine the presence or absence of one set of factors. The usefulness of the case study depends upon the ability of the Extension Worker.

Values of the case study method:

There has been much criticism regarding the values and limitations of case data. It is readily admitted that these case studies are absorbing and descriptive to reproduce peoples social attitudes and values. The question remains are these factors sufficiently penetrating and suitable to be generalised in other cases? Are the factors adequate, representative and do they deserve to be applied in other cases. Those who have persistently used this method

recognise the fact that such studies always need improvement. Inspite of the risk especially for wide application this study is very enlightened and fundamentally real with a wealth of concrete details, memories and multifarious reactions of social situations. These studies are greatly stressed as " The perfect type of sociological material".

There is considerable interdependence of the statistical method and the case study method. The statistical method deals with relatively few factors but it gives depth in understanding the social situations by indicating the extent, frequency and degree of associations. The case study seeks to determine social processes; it reveals the application of factors and indicates their sequences and inter-relationships. The statistical and the case study method frequently supplement each other since each views a given social situation from different angles and each placesca different methods on the social factors in the situation.

Sources:-

There are several methods of collecting data which are classified according to the scope, source and the technique of conclusions. The case study is a study of individual cases. There are two main sources from which data can be drawn:-

a. Historical sources.
b. Field sources.

1. Historical sources.- In these are included documents, papers, life histories, reports, studies, researches, etc. Documents are regarded as self- revealing records. These yield direct information regarding the structure and the continuity of experiences. Life histories help to secure the cross section of the actual experiences and attitudes of persons and groups. These aid in studying complex behaviour and situations in specific detail. The historical approach can be obtained even through preliminary interviews; conferences at specific intervals; conversation; expermental studies, observation of a wide series of tests. From interviews and conferences; many social reactions, community contacts; one can get a deep insight into the cause and effect relationships.

A life history record should be viewed as a series of events inter-linked with cultural values, group relationships that

reveal facts and the result of these events on the person and the unit or is under study.

2. Field sources:

Specific information can be obtained from living individuals connected with the subject under study. Through direct observation of behaviour in process it is also possible to collect the necessary information. This area can be classified as field work whereby events or facts can become known by direct observation while they are in process.

Field Observation:

Observation is a systematic deliberate study from the eye of spontaneous occurences at the time they occur. The principle of observation is to get insight into the significant inter-related elements within complex social situations and human contact. It is not possible to observe all occurences. The observer may not have the opportunity of observation at the right time; not all occurences lend themselves to study by observational techniques.

Scientific observations demand the formation of definite objectives, planning and recording, tests and control. The Extension Worker should create insight into the nature of cultural experiences and activities of the group; the meaning of these experiences and the social values attached to them; and the social systems which are the results of group experiences. Observations may not be supplemented by other methods of study, but observation often remains a realistic view of unposed behaviour which at times cannot be obtained by any other techniques. Observation enables us to penetrate behind the thinking, feeling and acting of the group.

There are two brief ways to gather facts from the field:

a. The direct method where the Extension Worker can observe and record data by his own direct observation.

b. The indirect method where the Extension Worker secures his data from others - that is those having first hand contact with the data. The direct method allows objective observation of a skilled observer and is subject to checking by other observers. The direct method gives us an account of the actual behaviour in a genuine life situation.

The errors in observation can be avoided if the Extension Worker constantly keeps in mind that it is easy to become attracted by conspicuous, dramatic and interesting factors. He should safeguard himself against observing merely unique and unrepresentative factors that do not form the habitual social patterns.

The Interviewing technique:

The interview can be regarded as a systematic method by which a person enters more or less imaginatively into the life of a comparative stranger. From face to face contact the Extension Worker can collect very useful information for the case study. The interview method is not a separate tool but is supplementary to other methods and techniques. It enriches the study of a person and serves as a check upon other informations secured through other sources and other means. A successful personal interview is usually very penetrating. It allows the interviewer more outward behaviour, aids him in taking his external observations, and enables him to study motivation, emotional responses, and social processes as they are reflected in human experiences and social situations.

Elements of the interview method:

Inspite of its main advantages the interview has its own limitations. Those who are interviewed inspite of being very honest and sincere suffer from faulty perception, faulty memory, and lack of insight and inability to articulate. Questions sometimes are vague and too obscure in meaning not permit precise answers. There are possibilities of misunderstanding when the questions involve the usage of unfamiliar expressions.

These elements can be partially overcome by pronounced free flowing interviews; using careful considered questions; standardising the ways of asking questions; standardising the ways of recording the interview information; and supplementing interview with other techniques.

Techniques in interviewing:

a. Preparatory thinking:- Usually the interview should be carefully though thrught in advance. It is necessary to plan in advance and keep the plan and mind flexible and expectant of new developments. Some knowledge of the daily routine of this data interviewed is essential. While interviewing groups it is wise to interview the leaders first.

b. The approach of the interview:- In the initial contact the object of interview should be clearly explained. This should be done in terms of the farmers capacity to understand the purpose . . . The farmer is entitled to know why he is being interviewed.

Sympathetic listeners:

A skillful interviewer should create an atmosphere where the farmers feel free to tell their own story in their own way and at their own pace. The interviewer should be a / quiet listener. At the same time he should be a creative and analytic listener.

Timely questions:

The interview/or at times needs to inject questions to get more relevant answers.

Critical points in the interview:

There are certain critical points which need special attention in interviewing. When the conversation turns to some intimate subjects, such as income and social customs, the emotions of the farmers may be touched. Whenever there is occasion for embarrassment the subject may be dropped for the time being and another line of conversation pursued for a time so that a less direct approach to the subject can be met later.

Closing the interview:

A successful interview should leave no important mental reserves. There is always a natural closing point to each interview. It is stated that the best results can be secured if each interview breaks off at a time when the farmers are still fresh, when they still have something important to say.

Methods of interviewing:

Experience indicates that farmers do best when:-

1. They are allowed to use a narrative form.
2. When least interrupted.
3. When encouraged to follow a time order.
4. When questions are used simply to encourage the narrative form.

The interviewer has to be careful regarding such farmers who adopt a rambling method of answering.

Practical hints in interviewing:

The interviewer must show interest in everything the farmer wishes to tell. Be at ease with the farmer and help him to be at ease with you. Adopt a leisurely pace. Allow sufficient time. View all problems from the farmers point of view. Try to gain, keep and observe the farmers confidence. Identify yourself with the farmer. Ask only questions which you would not resent in answering about yourself. Ask questions which are easily understood. Ask questions which do not imply the answers; take care not to sound insinuating; allow the farmer to tell his story in his own way. Make very few questions/what the farmer says. Listen with interest. Follow up every important clue of interest. Meet objections in a way which is satisfying to the farmer.

Limitations of the case method:

After the completion of a detailed case study the general tendency is to generalise. The deductions are exceedingly dangerous, if not impossible. Social psychologists have stressed the fact that readers are open to errors of perception, memory and judgment . There is always a unconscious bias with a special tendency to overemphasise unusual events. The data collected by case study methods do not lend themselves to quantitative checks. Case studies are seldom comparable.

General outline for writing up a case study:

1. Problem:- It is necessary to draw up a statement of a problem that is posed. The facts that bring out the problem should be explained in simple terms so that it becomes specific.

2. Role of Extension Worker:- The Extension Worker should collect information regarding the problem, and should try to think in terms of using this problem as a technique of extension teaching.

3. The situation:- A brief explanation of the problem and the factors in the situation must be taken into consideration. All aspects that are connected with the economy and practical side of the question should be examined in detail.

4. The unit:- A brief statement regarding the persons connected with the problem should be made. The people concerned with the programme should be given special consideration. The sociological factors connected with the local study should be examined in detail. All information connected with the people in so far as their educational level, income level, customs and traditions, cultural patterns of behaviour, should be carefully recorded, as they would have a direct influence on the achievement of the objective.

5. The solution and the development of the plan:

A brief statement of the practice or combination of practices selected to solve the problem should be made. Details of the practices and experiences of the locality should be collected.

6. Results of the programme:- Details connected with the objective of the case study and the results should be collected, such as how many people have adopted the recommended practices, what were the changes in behaviour, were the desired objective accomplished?

7. Summary:- The Extension Worker's observations and conclusions in regard to the factors that either formulated or contributed to the success of the programme will be helpful in improving extension programmes.

SEQUENCE IN METHOD DEMONSTRATION:

1. Shri R.C.Tyagi. - How to plough with M.B. Plough.
2. " S.N.Dixit. - Seed treatment of sugarcane with Aretan.
3. " A.K.Chandra. - Prophylactic spraying on Potato against late Blight.
4. " Shiv Singh. - Use of dibbler in sowing wheat.
5. " Asharfi Lal Srivastava. - Earthing up of Sugarcane crop.
6. " Udai N.Rai. - Green manuring.
7. " S.B.Singh. - Control of rats by Zinc phosphide.
8. " Satya Vir Singh. - Use of hand hoe with ridger.
9. " A.N.Singh. - Use of R.N.Cultivator.
10. " G.P.Mukherjee. - Use of hand hoe with ridger.
11. " S.S.Dhaka. - Selection of sugarcane sets.
12. " N.P.Tewari. - Preparation of Tobacco soap decoction.
13. " D.S.Sharma. - Method of sowing sugarcane.
14. " L.N.Trisal. - Use of V.V.F.Tools.
15. " M.S.Dan. - Method of compost preparation.
16. " P.S.Chauhan. - Use of wheel hand hoe.
17. " S.S.Bhatauria. - How to take soil sample.
18. " J.Prasad. - Basal dressing of super-phosphate in Sugarcane.
19. " R.S.Baswani. - Laying of Kitchen garden and use of fertilizer.
20. " V.P. Tewari. - Use of E.E.I. type hand duster.
21. " N.L.Sharma. - Preparation of Nursery bed for vegetables.

22. Sh. K.G.Roy. - Transplanting of onion seedlings.

23. " Bashir Ahmad. - Selection of Paddy seed by salt water treatment.

24. " R.L.Meena. - Preparation of Bordeaux Mixture.

25. " S.S.Ram Sharma.- Basal dressing of Mixture No: 2.

26. " Rajbanshi Singh.- Basal dressing of Mixture No: 2.

27. " J.S.Singhal. - Dusting of B.H.C. against termites before planting of sugarcane.

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METHOD DEMONSTRATION.

Demonstrations play an important role in extension teaching. These have been considered as the best tools of the extension worker in convincing farmers and improving their learning. Demonstrations involve all the three sences of hearing seeing and doing. The purpose of a method demonstration is to present an improved practice in an interesting and convincing way so that the people will appreciate its desirability and its practical application to their situation. Demonstrations combine the indefinite common place of words with the specific appeal of successful action. The learners get an opportunity of practicing combined with listening and hearing.

Domonstrations where the ways of applying the technique is demonstrated, are called method demonstrations. The demonstrations where the effect of use of the technique are shown are known as result domonstration. There are some demonstrations where we combine both. We show the methods of applying techniques and also demonstrate the effect of the use of those techniques. Such demonstrations are called combine demonstrations.

Domonstrations properly conducted produce a high proportion of acceptance at a relatively low teaching cost. Domonstrations become local events, the publicity from which carries the news of a suggested practice and the proof of its value into unexpected areas.

With the above objectives in view, this topic was taken up to acquaint each participant with the skill of method demonstration. Talk followed by discussion and practical demonstration was taken up by the staff member.

The participants were divided into four subject matter groups viz: Improved cultural practices, improved agricultural implements, plant protection and manure and fertilizers: Since each participant was required to conduct a method demonstration, he was guided to prepare a plan outline of the actual job to be performed, rehearse it before presentation and prepare the subject matter well.

The topics selected by the participants were simple but very essential for the cultivators in

their production programme. It is expected that the participants have got mastery and confidence on the topic taken up by them by way of demonstration in the campus as well as in the villages. The trainees hope to repeat these demonstrations when they go back to their work.

A few method demonstration out lines are presented here as samples to guide other workers.

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METHOD DEMONSTRATION OUT-LINE.

1. Subject-topic. — Laying of Kitchen garden and use of fertilizer in Bhindi.

2. Why the subject is important?
   i) Economy in the use of vegetables for home consumption.
   ii) Continuous supply of vegetables.
   iii) Can be managed by farmers family.
   iv) To increase in yield by use of fertiliser.

3. Place, date and time. — Farm of Shri Jai Singh of village Jhanjhari, dated: 27.2.1965, 10.00 A.M.

4. List of equipment and material needed. — 1. Spade. 2. Rope and pegs. 3. Manjha. 4. Vegetable seeds-Bhindi Pusa Sawani. 5. Fertilizer - Superphosphate and C.A.N.

5. Demonstration break-down:

Important-steps.	Key-points.
1. Land should be prepared to a fine tilth.	1. The land should not be uneven and clods should be broken.
2. The land should be divided to small plots (12'x8')	2. There must be small channels between the plots for irrigation.
3. These each small plots were marked with the help of rope and pegs for sowing seeds at a distance of 1 ft.	3. The rows must be uniform.
4. Small furrow is opened at a depth of 3"-4".	4. Depth of furrow should not be more than 4".
5. Superphosphate and C.A.N. should be applied in furrows @ 60 Kgs superphosphate and 40 Kgs C.A.N. per acre basis.	5. The fertilizer should be applied just within the furr
6. Cover the fertilizer by 1" layer of soil.	6. The fertilizer should be properly mixed up with the soil.
7. Seeds are sown at a distance of 6" from point to point in the rows at a depth of 1" (seed rate) (@ 8-10 Kgs. per acre for summer crop).	7. The seeds should be sown uniformly for good germination.

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Method Demonstration Outline

1. Subject-Topic. — Fertilizer and manure - Basal dressing of mixture No:2.

2. Why the subject is important?
   i) Best use of plant nutrients by the crop.
   ii) Proper placement at required depth.
   iii) It is easy and effective method.

3. Place, date and time.

4. List of equipment and material needed:
   1. Desi plough.
   2. Pora.
   3. Yoke with one pair of bullocks.
   4. Fertilizer mixture No:2.
   5. Balance and weights.

5. Demonstration breakdown:

Important steps.	Key points.
1. Prepare field well.	1. Fine seed bed so that plough can work smoothly.
2. Attach Pora at desired depth.	2. It should be 3"-4" deep of 1"-2" below the seeds in the soil.
3. Estimate number of rows to be drawn in the field.	3. Length divided by space by row to row of 9" apart.
4. Allocate fertilizer for each lines.	4. Divide fertilizer by the number of lines of the field.
5. Adjust fertilizer in each line.	5. It should be evenly distributed.
6. Check the depth of placement. It should not either be deep or shallow.	6. Deeper placed fertilizer will leach down and will not be available to the plant roots.
7. Sowing of barley behind the plough by kera system.	7. Sowing can be done at the time of Basal dressing of mixture No:2.

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Method Demonstration outline:

1. Subject-Topic: Dusting of BHC against termites in sugar cane before planting.

2. Object:-

1. How to protect the sugar cane crop against the attack of termites.

2. To control the attack and increase the yield.

3. Place, date and time:-

4. Equipment :- Hand duster, balance.

5. Material:- 10% BHC, Field ready for planting sugar cane.

5. Demonstration Breakdown:

Steps	Key points.
1. Weigh the BHC	10 Kg per acre.
2. Clean the duster.	
3. Put BHC in the duster.	The mouth should not be filled up to the brim. Only 2/3 rd should be filled.
4. Close the box of the duster.	
5. Hang the duster against the shoulder.	Hang it against left shoulder.
6. Cover the mouth with cloth.	
7. Stand in the furrows ready for planting sugar cane.	Sowing in branches to be preferred.
8. Rotate the handle by right hand smoothly rotating the rod by left hand.	To ensure even dusting.
9. Complete the operation and take off the duster.	Dusting to be done in the direction of wind. It should not be done against the wind.
	Wash the hands.

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METHOD DEMONSTRATION OUTLINE

1. Subject -topic. — Preparation of1% Bordeaux Mixture.

2. Why the subject is important:
   - i. It is one of the oldest and most effective Copper fungicides.
   - ii. It controls fungi menace.
   - iii. It can be prepared with the help of locally available resources.

3. Place, date and time. — Lecture Hall, E.E.I. Nilokheri.

4. List of equipment and material needed:
   1. Good quality copper sulphate (bluestone) - 5 lbs.
   2. Good and fresh unslaked lime. - 5 lbs.
   3. One earthen or wooden container.
   4. Two metallic containers.
   5. Fine cloth or a strainer.
   6. Wooden stick.
   7. Clean nail or knife.
   8. Oil or brown sugar - 1oz.
   9. Washing soda- 2lbs.
   10. Rosin - 4 lbs.

5. Demonstration breakdown:

Important steps.	Key points
1. Five pounds of $CuSO_4$ is weighed and then disolved in a small quantity of water. It should be either powdered and then dissolved or it should be placed in a gunny bag and kept in water overnight.	1. Preparation of Bordeaux mixture needs care. 2. Metallic containers should not be used for making $CuSO_4$ solution. It should be made either in earthen pot or wooden container.

2. Five pounds of unslaked lime should be weighed and slaked and then mixed thoroughly in a small quantity of water. It should be stirred well.

3. Water should be added to both the solution till the volumes of the solutions in both the cases come upto 25 gallons each.

4. The solutions should be strained with a fine cloth or a strainer to remove any undissolved particles or stones.

5. Then both the solutions should be poured slowly preferably simultaneously into a third container or the $Cuso_4$ solution into lime solution. While pouring the mixture should be stirred well with a wooden stick. Now the mixture is ready for use.

6. For preparation of large quantities of Bordeaux mixture large quantities of more concentrated solutions of $Cuso_4$ and lime are prepared.

   i. Dissolve 50 lbs of quick lime to make 50 gallons of lime solution.

   ii. Similarly dissolve 50lbs of $Cuso_4$ to make 50 gallons of $Cuso_4$ solution.

   iii. This gives a stock solution of each containing one pound of $Cuso_4$ and lime to a gallon.

   iv. If 200 gallons of 5:5:50 Bordeaux mixture are needed, 20 gallons of lime solution should be poured

3. Bordeaux mixture should be used the day it is prepared.

4. It should be used before disease appears as it acts as a protective fungicide.

5. Bordeaux mixture should not be applied during rains or on a very hot day when plants are showing signs of temporary wilting.

6. To increase the sticking properties of Bordeaux mixture:

   a. Add 10oz. of oil or brown sugar to it.

   b. Dissolve 2 lb. washing soda in 2 gallon warm water and then add 4 pound rosin to it. Boil it for about an hour, stirring well. Add this solution to 50 gallons of Bordeaux mixture prepared.

7. Various strengths are:-

   i. 4:4:50.
   ii. 3:4:50
   iii. 3:3:50
   iv. 2:2:50

into the tank and after having filled it with 100 gallons of water, stirring thoroughly, 20 gallons of $Cuso_4$ solution should be added. Finally, the tank should be filled upto 200 gallons. This gives 200 gallons of 5:5:50 Bordeaux mixture.

7. Acidity of Bordeaux mixture is dangerous to plants, it should be tested before use. Immerse a portion of bright and clean steel surface of a blade of knife. If coppery colour appears on the blade of knife more of lime should be added till there is no brown coppery colour on the blade of knife, Bordeaux mixture is now safe to use.

Method Demonstration Outline:

1. Subject-Topic :- Spraying of Potato crops against Blight Diseases.

2. Why the subject is important?
   To save the crop against disease.
   ii) To increase production by controlling disease.
   iii) To increase National wealth.

3. Place, date and important? Nilokheri, 18.2.65. at 3.00 P.M..

4. List of equipment and material needed.
   1. Hand compression sprayer.
   2. One container of 4 gallon capacity.
   3. 100 grams of copper fungicide
   4. One bucket Blitox
   5. One wooden stick.

5. Demonstration breakdown:

Important steps.	Key points.
1. Take weighed Blitox in the container and mix with little water.	1. Ratio should be 2 Kg of Blitox in 80 gallons of water for 1/acre (100 gms in 4 gallons for 0.05 acre).
2. Mix the solution in the entire 4 gallons of water.	2. To ensure thorough mixing.
3. Fill the container of sprayer with solution.	3. Sprayer should be clean before hand.
4. Close the container tightly.	4. 2/3rd of the container should be filled with solution to give space for vaccum pressure.
5. Pump 50 strokes when pressure will be 60 lbs/sq.inch which can be seen from the meter.	5. More than 60 lbs pressures may burst the sprayer.

6. Start spraying in the field when the crop is 4 to 5" high.

7. After spraying is over wash the sprayer alongwith nazzle.

8. Wash your mouth, hanus, legs etc.

9. Repeat spraying in the above method after a fortnight.

6. Spraying should be done in favour of wind direction and not against wind.

7. See that both sides of the leaves are properly sprayed.

8. Nozzle of sprayer should be adjusted for proper spraying.

9. It is slightly poisionous so precautions should be taken when handling.

Method Demonstration Outline:

1. Subject-Topic: How to prepare manure pit.

2. Why the subject is important?
   1) Manure decomposes well.
   2) All waste material grass etc. can be decomposed.
   3) Keeps the cleanliness near-by residence.
   4) Decomposed manure have high manurial value.

3. Place, date and time. Village Jhanjhari at ..... 3.P.M. with Shri Raja Ram.

4. List of equipment and material needed.
   1. Spade, one basket
   2. Pick-axe, measuring tap
   3. Rope.

5. Demonstration breakdown:

Important steps	Key points.
1. Select the site for compost pit at high level. There should not be stagnation of water.	1. Select the site above normal level or at high level.
2. Measure with the help of tap 10 feet in length x 6" in width.	
3. Dig the pit upto 3 feet deep with the help of spade at one side and 3½ feet on other side.	
4. This may be dug slanting from top to bottom towards inner side of the pit for good aeration.	2. Dig the pit a bit slanting 3 to 3½ feet deep.
5. Make the parts of the pit 3½ feet each section.	3. Make the 3 parts of the pit and fill these parts one by one.
6. First fill the first part of the pit upto 1½ feet above the ground level.	4. Start filling from side which is 3 feet deep.

5. After filling each section 1½' above ground level put soil over it and plaster it by cow dung.

6. After filling the pit keep it for 5 months for effective decomposition.

7. First put the 6" layer of well rotted manure and put 4" of fodder waste and put 2" layer of cow dung paste. This may be repeated till it reaches 1½ feet above the pit and then plaster by cow dung or soil.

8. In this way fill other pit sections and plaster it from the top.

9. Keep this pit filled for about 5 months. Now your manure is ready for use. It is a well rotted manure.

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METHOD DEMONSTRATION OUTLINE

1. Subject-topic.

Preparation of tobacco soap decation.

2. Why the subject is important?

i. Effective against aphids & citrus psyllo.
ii. Can easily be prepared by villagers themselves.
iii. Materials are locally available and are less costly.

3. Place, date and time.

Lecture hall, F.E.I. Nilokheri.

4. List of equipment and material needed:

1. Balance with weights.
2. Bucket with measuring glass.
3. Container
4. Strainer
5. Utensils.
6. Stove or Burner.
7. Rod
8. Towel
9. Soap
10. Tobacco
11. Water.

5. Demonstration breakdown:

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Important steps	Key points
1. Weighing of tobacco, soap and water.	1. Ratio 1:1:10
2. Putting of tobacco in water.	
3. Heating of the mixture	2. Just upto boiling point.
4. Cutting of soap slices	3. Very thin slices are required.
5. Removing and churning of mixture.	Mixing of soap throughly in hot stage.
6. Straining of the tobacco extract.	
7. Mixing of soap slices with tobacco extract	
8. Keep in the container for about ten days.	Keep away from the approach of innocent person or boy.

METHOD DEMONSTRATION OUTLINE

1. Subject-topic.

Sowing of sugarcane by Flat Bed Method.

2. Why the subject is important?

1. Better utilisation of seed.
2. To minimise the labour expenditure in weeding, hooing and other inter-culture operations.
3. To facilitate carthing.
4. To facilitate aeration in the standing crop consequently minimising the attack of insect, pest and disease.
5. To prevent lodging of sugarcane crop.
6. To derive more profit and yield.
7. To maintain the purity of seed.
8. To facilitate proper method of irrigation.

3. Place, date and time.

4. List of equipment and materials needed:

1. Sets having 3-4 buds selected carefully.
2. The required quantity of Superphosphate and Nitrogenous fertilizer.
3. Areton chemical, with tub, bucket of water 15 gallons.
4. B.H.C. 10% or Eldrin dust.
5. Spades.
6. Planker.
7. Bullock pair with yokes.
8. Double mould board plough or Ridger.
9. String or rope.
10. Measuring tape.
11. Duster.
12. Hand hoe if available.

5. Demonstration breakdown.

Important steps.	Key points.
1. Arrange all the material and equipments required in the field.	

2. Measure length, breadth of the field and calculate the area in acres.

3. Calculate the quantity of Superphosphate required for the field @ 40 lb P_2O_5 per acre, i.e 250 lbs or 120 kg per acre of S.P.

4. Calculate the N_2 required @ 40 lbs per acre i.e. CAN 120 kg per acre.

5. Mix both the fertilizers and keep ready for drilling.

6. With the help of measuring tape mark furrow points at 2 feet distance along side the head bunder both side (breadth of the field).

1. Distance from furrow to furrow should be 2'.

7. Fix string or rope along the length of the field joining first two points to mark to draw the first furrow.

8. With the help of mould board plough or digor draw at least 5 furrows taking help of rope.

1. Furrows should be 12" wide and 9" deep and straight.

9. At the time of drawing furrows fix drill in the ridger and drill the mixture of the S.P.& CAN about 3" deep under the furrow.

1. Just the quantity required for each furrow should be calculated so that the whole field gets even quantity of fertilizer.
2. It should be placed at least 2"-3" deep below the sets..

10. In the same draw furrows in the whole field maintaining 2feet distance between Row to Row and straight along with fertilizer too should be drilled.

11. Dust 10% B.H.C. in furrows @ 25 to30 lbs per acre and mix it well in the soil with the help of hoe.

1. While mixing the fertilizer placed should not be disturbed.

12. Treat the sets with Areton 0.5% solution i.e. 200 gms will be required for 40 Kg or 10 gallons of water which will be sufficient for one acre.	1. Dip the sets for 3-5 minutes only. 2. Do not use hand in preparing solution. 3. Wash hands thoroughly with soap after completing sowing.
13. Put the sets in the furrows. In such a way that each sets overlaps other's 1/4th in length.	1. The eye bud should face outside the furrow.
14. Cover the sets, 2"-3" deep. With soil with the help of planker or spade.	1. The eye-buds should not be injured while covering. 2. Better if we remove the sheath to open the eye bud, because sometimes sheath retards the sprouting of eye-bud.

WORKSHOP ON VISUAL AIDS

Audio-visual aids are essential for good teaching, is not denied by any Extension worker. Even then it has been observed that they are not being used to the extent, they should be by the field workers. One of the many factors responsible for the situation may be that the Extension workers do not have the idea of the possibilities that are available to them for the use of audio-visuals. Many of them do not know the vast opportunities that are available to them even in the field situations to make use of these teaching materials.

Keeping these factors in view an effort was made through a two day workshop on audio-visual aids to provide an opportunity to the participants to dig out their own talent and intelligence in this field. The objectives of the workshop were as follows:

1. To create an interest in the importance of audio-visuals in good teaching.

2. To make the participants feel that within available resources, it is possible to prepare visuals.

3. To provide a few skills to the participants in the preparation of visuals.

4. To provide them a chance to prepare visuals for the practice teaching.

To achieve these objectives, the participants were provided a theoritcical background of general principles relating to the preparation, selection an d use of audio-visual materials. The Lecturer in Audio-visual Aids had earlier taken talks on communication process with special emphasis on the following topics:

1. Process of communication in teaching - nature and importance of communication, key elements of communication. -

2. Psychological basis of audio-visual materials - their role in communication. -

3. Audio-visual materials in extension teaching - significance of audio-visual communication in increasing agricultural production.

4. Various audio-visual materials - their advantages and limitations.

This provided a broad frame-work of the field of audio-visual education to the participants.

During the communication workshop the attention of the participants was directed to the following specific aids that are mostly found useful in their work. They were taken by the members of the staff who are qualified in Extension teaching as shown below:

1. Puppets
   - types and use. - Dr.H.W.Butt
2. Flash cards
   - importance in communication. - Sh.Badri Singh
3. Flannolgraphs
   - Importance and ways of using it - " C.L.Gupta in rural conditions.
4. Posters
   - their purpose and scope. " "
5. Charts
   - their effective use in communi- cation. " "
6. Exhibitions
   - as one of the audio-visual aids " P.N.Tandon

A talk on practical domonstration of preparing visual aids without the help of the Artist was given by the Chief Artist of the National Dairy Research Institute, Karnal

Organisation:

The group was divided into four sub-groups. A consultant was provided to each group and the help of an Artist was also given to each group to enable them to learn the techniques of preparing simple visuals with the available materials.

Selection of theme:

The group met in the afternoon to decide for the common theme for preparing visuals. After a prolonged discussion, the group came to the conclusion that it would be better if each group prepare a set of flash cards relating to summer vegetable cultivation or some fruits. Choice was left to the individual groups. Ultimately they came out with the following topics for the preparation of a set of flash cards. It was decided that each individual should prepare atleast one card in the group as a part of the set of flash card for that group.

Group No.I		Topic	Consultant
1.	Sh.Bashir Ahmad	Tomato culti-	Sh.Badri Singh
2.	" D.S.Sharma	-vation	
3.	" S.S.Dhaka		
4.	" N.L.Sharma		
5.	" S.S.Bhadauria		
6.	" A.Srivastava		
7.	" K.G.Roy		

Group No.II			
1.	" L.N.Trisal	Bhindi culti-	" C.L.Gupta
2.	" Satyavir Singh	-vation	
3.	" Pratap Singh		
4.	" Shiv Singh		
5.	" R.C.Tayagi		
6.	" A.N.Singh		
7.	" G.P.Mukherjee		

Group No.III			
1.	" R.L.Moona	Brinjal culti-	" P.N.Tandon
2.	" V.P.Tewari	-vation in Zaid	
3.	" S.B.Singh		
4.	" N.P.Tewari		
5.	" S.N.Dixit		
6.	" A.K.Chandra		
7.	" J.S.Singhal		

Group No.IV			
1.	" Narsingh Dan	Papaya culti-	Dr.H.W.Butt
2.	" S.S.Sharma	-vation	
3.	" U.N.Rai		
4.	" J.Prasad		
5.	" R.B.Singh		
6.	" R.S.Baswani		

On the second day the group worked in the practical session for the preparati on of the flash cards. The Artist helped them here and there to visualise their thinking and in the colour scheme and gave a little touch here and there. Materials were provided by the Institute. The workshop continued upto 3.00 p.m.

Presentation:

In the afternoon each group presented the set of flash cards to the entire class. The group gave emphasis to the following points:

1. Why did they select this visual?
2. How did they get this idea?
3. How much outside help did they obtain?
4. What is their impressions about their work?

This provided a broad frame-work of the field of audio-visual education to the participants.

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4. Posters
   - their purpose and scope. " "
5. Charts
   - their effective use in communi- cation. " "
6. Exhibitions
   - as one of the audio-visual aids " P.N.Tandon.

A talk on practical domonstration of preparing visual aids without the help of the Artist was given by the Chief Artist of the National Dairy Research Institute, Karnal

Organisation:

The group was divided into four sub-groups. A consultant was provided to each group and the help of an Artist was also given to each group to enable them to learn the techniques of preparing simple visuals with the available materials.

Selection of theme:

The group met in the afternoon to decide for the common theme for preparing visuals. After a prolonged discussion, the group came to the conclusion that it would be better if each group prepare a set of flash cards relating to summer vegetable cultivation or some fruits. Choice was left to the individual groups. Ultimately they came out with the following topics for the preparation of a set of flash cards. It was decided that each individual should prepare atleast one card in the group as a part of the set of flash card for that group.

Group No.I		Topic	Consultant
1.	Sh.Bashir Ahmad	Tomato culti-	Sh.Badri Singh
2.	" D.S.Sharma	-vation	
3.	" S.S.Dhaka		
4.	" N.L.Sharma		
5.	" S.S.Bhadauria		
6.	" A.Srivastava		
7.	" K.G.Roy		

Group No.II			
1.	" L.N.Trisal	Bhindi culti-	" C.L.Gupta
2.	" Satyavir Singh	-vation	
3.	" Pratap Singh		
4.	" Shiv Singh		
5.	" R.C.Tayagi		
6.	" A.N.Singh		
7.	" G.P.Mukherjee		

Group No.III			
1.	" R.L.Meena	Brinjal culti-	" P.N.Tandon
2.	" V.P.Tewari	-vation in zaid	
3.	" S.B.Singh		
4.	" N.P.Tewari		
5.	" S.N.Dixit		
6.	" A.K.Chandra		
7.	" J.S.Singhal		

Group No.IV			
1.	" Narsingh Dan	Papaya culti-	Dr.H.W.Butt
2.	" S.S.Sharma	-vation	
3.	" U.N.Rai		
4.	" J.Prasad		
5.	" R.B.Singh		
6.	" R.S.Baswani		

On the second day the group worked in the practical session for the preparati on of the flash cards. The Artist helped them here and there to visualise their thinking and in the colour scheme and gave a little touch here and there. Materials were provided by the Institute. The workshop continued upto 3.00 p.m.

Presentation:

In the afternoon each group presented th the set of flash cards to the entire class. The group gave emphasis to the following points:

1. Why did they select this visual?
2. How did they got this idea?
3. How much outside help did they obtain?
4. What is their impressions about their work?

After each presentation the visuals were analysed by the Vice Principal and the Lecturer in Audio-visual Aids who were present in the session. The reactions brought out by the participants and the staff gave the impression that the workshop was successful in achieving its objectives. The two days session has given sufficient education to the participants to discrominate between good and bad quality and use of visuals in Extension work.

Comments:

1. Communication workshop was successful in achieving its objectives.

2. Participants had a feeling of satisfaction about the use of visuals after the workshop was over.

3. Many participants mentioned that the time devoted for the workshop was little less.

FLASHCARDS

Badri Singh

Flashcards are usually arranged in series for the task of putting across a message shared.with other cards. Flashcards are a series of pictures (sometimes just messages) shown in chronological order so the speaker will have a visual aid to help focus the attention of the learner.

Good flashcards are directly related to a topic and designed to attract attention, and motivate the observer to action or to change his attitudes.

Effective flashcards:

1. Drive home a single idea.
2. Tell a story at a glance.
3. Attract attention.
4. Motivate action.

Flashcards are brief visual messages. They are used to emphasise important points in a talk. They are easy to carry and can be made easily and inexpensively from local materials. They should be planned to support the presentation step by step. They usually summarise the important points of the lesson that the audience should remember.

It is best to limit the number of flashcards to 10 to 12 for one talk. In order to plan the most effective cards, study your talk and pick the main ideas that you want your villagers to remember.

How to teach with flashcards:

1. They should be used in groups of not over 30 people.
2. They should be large enough for everyone to see - at least 22 by 28 inches.
3. Be simple line drawings or photographs, or cartoons.
4. Be adapted to local conditions.
5. Have plenty of colour.

6. The story on each card must be familiar to you.

7. You must use simple words and local expressions - bring in local names.

8. You must hold cards so people can see clearly.

9. You must hold cards against body and not up in air.

10. You glance down at card as you tell the story.

11. Have the cards stocked in order.

12. Be enthusiastic and enjoy telling the story.

13. Let the audience participate.

14. As one card is finished, it is slid behind the other set that it will be in order the next time it is used.

How to prepare flashcards:

1. Material:- Wrapping paper, light coloured construction paper.

2. Size:- From 9"x12" to 22"x28" depending on the number of people you want to address.

3. Plan them well - visualise the drawing on each flashcard befitting the main point of your talk.

4. Make them simple - have simple line drawings, photographs or cartoons. A simple drawing is easily understood and remembered by the learners.

5. Use action - Try to depict action in your drawing. It attracts more attention.

6. Make visual materials big - make your drawing and captions fill most of the space. Short, simple and surprising captions with big drawings, attract more attention.

7. Have plenty of colours - look for proper contrast o colours. Colour has great attention - getting value and will add to the effectiveness of the flashcards.

8. For lettering, use one of the followings:

i. Written - write bold letters.

ii. Free hand printing - trace with ink or pencil with the help of blocks for letters.

iii. Cut-out letters - letters from newspapers magazines etc.

FLANNELGRAPH

C.L.Gupta

The flannelgraph works on the principle, that one piece of rough textured cloth will adhere or stick to another.

Pieces of flannel felt or sand paper will stick to a background of flannel without an adhering agent. This is true even when the backgroun is in a vertical position.

Khadi and markin can also be used for this purpose.

If scraps of any of those materials are pasted or rubber cemented to the backs of photographs, those photographs will cling to a large vertical piece of flannel until they are removed. Even illustrations from magazines can be u sed for this purpose.

Sand paper scrop work best of all for backing the photographs. Material backed with sand paper will take hold of the flannel background without the slight hand pressure that is sometimes needed to flatten flannel backed material.

Flannel board:

It is simply - on board covered with a felt like material. Objects treated with a sensitive backing may be attached through the principle of friction.

Variety of materials may be attached to a felt or flannel surface without using a sensitised backing:

Cloth, wool, khadi,
blotters, cotton, velvet,
sponge, flannel

You can use a blanket, a piece of rough textured cotton cloth or perhaps a mosquito net. Put it over upturned table, bed fence or attach to a wall to provide support.

Advantages:

1. They are at their best as lecture aids.

2. a) to make comparisons.

   b) to show change (land patterns trends)

c) to tell progressive stories.

2. Clarify facts - by adding, shifting and removing the parts.

3. Add action to the talk.

4. Add suspense to the talk.

In some ways it is like a drama. Like a drama it unfolds before your eye. You both see and hear the story. The action of the moving parts attract your attention. The suspense of the unfolding story hold your interest.

It has a story and a plot. It has a background or set. It has parts that can be moved about like the actors.

5) It lends drama and interest through a careful eye catching presentations - by the spectacle of simply pressing meaningful materials against a surface and having them stay there.

6) It appeals to young and old alike - it is the result of the appeal of visual and manipulative material.

7) Flexibility and nature of the medium.

8) Provides sensory experiences in learning.

9) Provides opportunities for presenting planned and prepared material quickly without losing continuity in a story or other sequence of idea.

Tips on presentation:

A few techniques will insure a smooth performance before presenting materials:

1. Arrange the materials in order - number them if possible.

2. Try the layout, be sure it fits the space.

3. See that there is good lighting.

4. Place flannel board at eye level and as a slightly inclined angle.

5. Check contrast of colours and eye appeal.

6. Tilt the surface back slightly so that parts will not topple down.

7. Keep the flannelgraph out of the wind because a sudden gust can blow parts off - distracting the audience.

8. In preparing a flannelgraph story do the following:

   a) Decide exactly what you want to tell your audience.

   b) Develop your story in a logical step by step sequence.

   c) Keep it as simple as possible.

   d) Visualise the important points of your story and decide what kind of parts are needed and what they will illustrate.

   e) Plan to make your material in drawings photographs or printed illustration.

   f) Have a bold title of your story - sometimes it is effective.

9. Practise your presentation two or three times before you give it before an audience.

10. Form an habit of picking up a part applying it quickly and stopping to one side - continuing your story in words and pointing if necessary to the figure from the side.

11. Store the figures in folders arranged and numbered for step by step presentation.

<u>Check-up:</u>

Did the presentation accomplish the objectives?

Did it meet the needs and interest of the learners?

Were the materials appropriate?

Were the materials displayed alternatively with contrasting colours and uncluttered space.

Did each display presents a single clear cut idea?

Were the peculiar merits of the flannel board being used to greatest advantages?

Construction detail:

Size - a 30 by 40 inch flannelgraph of simple and bold parts should carry its message to an audience of 150-175 people for an audience of over 200 a larger one would be better. Experience will soon tell you, whether or not your flannelgraph is of satisfactory size.

1. Folding:

In case you have touring job, have a folding one. A folding flannel board is more compact, require less room for storage and transportation.

Since the textured surfaces fold together they keep cleaner and are less apt to be torn or damaged than those with a single rigid backing. Two pieces of flannel of different colours may be sewed together around the edges. Thus by turuing the board the background colour can be changed which adds rest to a presentation when more than one flannelgraph is used.

2. Colour:

Darker colours usually are more satisfactory because they provide excellent contrast for light coloured parts. Dark greens, blue and blacks are particularly good colours for backgrounds surfaces.

The material work best when they are real and rigid. Illustrations on thin paper tend to curl up and fall off the flannelgraph. This can be avoided by mounting them on stiff, light card board with cloth backing attached to the card baord.

Use only enough glue to hold the cloth to the surface part. Too much glue will soak the backing cloth and cause the fibres of the cloth to mat and lose their ability to stick to the flannel.

Sand paper strips an inch or so wide should be stuck on an intervals of several inches. A medium to coarse grained sand paper will work best.

References:

1. How to make and use a flannelgraph - Extension Service, U.S.Deptt. of Agri.

2. Felt boards for teaching

- Visual Instruction Bureau, University of Tazas.

3. Using visuals in Agriculture Extension programme

- U.S.International Cooperation Administration.

4. Guide for village worker - Extension Methods

- Ministry of Food and Agriculture.

5. Some simple visual aids

- D.M.Anand

A.V.Education - vol. 1, and 4, Jan. 1958

Ministry of Education, Government of India.

6. A.V.Materials

- Dale

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EXHIBITION AS ONE OF THE AUDIO - VISUAL AIDS

P.N. Tandon

Exhibitions are one of the important approaches as far as extension methods are concerned. Whereas extension methods are numerious, exhibitions of models, photographs, films, film strips etc. are the most reliable methods in approaching, working with and influencing village community to become interested in the Community Development Programme and acquire better methods and technique in solving their problems through their own efforts.

Exhibitions have been held in the past on specific occasions at some selected places. There hasbeen somewhat little emphasis on this method of extension approach to the village community. Exhibition in the past were not in fact, based on actual experience in the field which could convey to the people what was actually to be conveyed. It is with continuous demonstration that makes it possible to present good exhibits which are simple, limited to one idea, attractive and timely.

What is it?

Exhibition is a systematic display of models, specimens, charts, posters and information panels in a sequence so as to be significant in teaching or creating interest in the participating member. Exhibitions cover three stages of extension education viz; arousing interest, creating a desire to learn and providing a chance to take a decision.

Why is it?

1. To acquaint the people with better standards.
2. To influence people to adopt better practices.
3. To create interest in a wider range of people.
4. To promote understanding and great good-will towards extension methods.

What to do?

1. Decide upon the character of the exhibition, taking into account the time, audience and immediate purpose.

2. Make it simple and understandable by working upon one idea at a time or place.

3. Let there be sequence and continuity.

4. Use few rather too many objects.

5. Spacing and decoration should have an appeal to the eye.

6. Label your exhibits briefly, but legibly.

7. Eye - level display is a ideal.

8. Action exhibits attract attention and kindle curiosity.

9. Interpreters should be thoroughly informed and precise in their explanation.

10. Distribute relevant literature.

11. Give advance publicity.

12. The exhibits should be of impressive size and portable.

Suggestions:

1. Use local material as far as possible.

2. Take advantage of local fairs and festivals.

Advantages:

1. One of the best media for reaching illiterates.

2. Provides propaganda value where extension work is beginning.

3. It has an imaginative appeal.

4. It caters to the mixed group.

5. It can fit into festive occasions and serves recreational requirements.

6. It promotes the creative ability to some extent.

7. It can stimulate competitive spirit when used for this purpose.

Limitations:

1. It requires a lot of preparation and investment.
2. It can not be used widely.
3. It can not be used repeatedly at the same time without making substantial changes.
4. It can not lend itself for all topics.
5. It can not represent all the phases of work.

Evaluation:

Estimate the effectiveness of the exhibition by:-

a. analysing the attendance and enquiries and request;
b. by making notes of suggestions given.

Exhibition as an extension method is subject in itself which has to be studies and applied. It may involve comparatively more expenditure at the first set up but it will not entail wastage of money and material. Once set up models will only require retouching from time to time and fresh models are added with the experience acquired in the field so that right message for the right cause is conveyed to the people at the right time.

C H A R T S

C.L.Gupta

A chart may be defined as a presentation of ideas and facts, through drawings, words and pictures.

Idea: The message that the chart is trying to get across to the audience.

Facts: The material that are needed to make the idea realistic in the minds of the audience.

Drawing: May take such forms as diagrams, graphs etc. (an numbers) are used as titles and explanatory comments.

Sketches: May take such forms as symbols and photographs. They are used to give meaning to the facts.

Objective:

The overall purpose of a chart is to present in "visual" terms ideas or facts which may be difficult to understand if treated only in words.

It helps to present facts and ideas in condensed and summarised form.

It helps to show relationship - such as comparisons, organisational relationships, etc.

It helps to present statistics in an interesting form.

Types of Charts:

A few types of charts important from the instructional point of view are:-

a. Organisation chart:- It shows the break down into small individual units, or an organisation, agency or department and the relationship of the units one to another.

b. Flow chart:- It shows the sequence or process is involved in doing a thing, for example steps involved in mixing and spraying of apple trees.

c. Pie chart:- Presents total or whole amount.

It shows how several parts make up the whole. Each section of the pie should have its own colour. A colour key in the margin will help the viewers to remember what the different sections represent.

d. Trend chart or line chart:- It is useful in showing trends and relationship. A single line may represent growth and expansion. Multiple lines show not only trends but also the relation between, for example, market price and quantity of farm produce.

e. Pictorial chart - Eye catching appeal.

It provides a vivid picture and creates a rapid association with the message.

f. Suspense chart:- Paper strips are used to cover the different portions on the chart. Strips are removed one by one, as the teacher moves on with his explanation of the learner to one portion at a time.

<u>Criteria of a good chart:</u>

1. Subject-matter - The kind of information that you are trying to put across to your audience should be suitable for display in the form of a chart. Statistical information is the most usual type presented in chart form.

2. Audience - The experience, education and background of the audience should be given due consideration in preparing a good chart.

3. It should be simple - Develop only a few ideas. Include only important data. Avoid unnecessary details.

4. Allow plenty of space - The elements should not be crowded. It should be neat and attractive.

5. Size - Should be easily visible to the group. 28"x28" is suitable for most class rooms of about 30 students.

6. Should be pictorial - Make a balanced use of pictures, drawings, graphs, diagrams and verbal material to explain the ideas.

7. Maintain consistency or logical order in presenting the figures - from large to small or small to large.

PUPPETS

H.W.Butt

Puppet shows have not been used very commonly for instructional purposes. Many of the Extension workers still feel that puppet shows are more suitable for Home Science groups. Puppets can be effectively used for some kind of topics connected with the syllabus of the Village Level Workers. Puppets can be very effectively used for small audiences to create an awareness of a certain topic. Puppet shows are not effective if they are not combined with other methods. Interesting characters women into intriguing stories can bring about very effective methods in teaching.

Puppet is a figure usually small representing a human being - doll.

Puppet show is a kind of drama - a drama of dolls depicting human beings - it is a very old form of drama which goes back to ancient Greek days.

Objectives of a puppet show:

1. To convey a message - to teach.
2. To use indirect means.
3. To provide entertainment.

Special values of a puppet show:

1. The subject-matter is stirring and attention-compelling.
2. Each participant learns to understand intimately the character he portrays.
3. The value of emotional involvement.
4. They teach perfomers and all those involved to work cooperatively.
5. Other incidental values - in diction, voice control, facial expression body carriage and poise.

6. Puppetry is not meant only for children.

7. It enjoys a distinctive position in theatrical art.

8. It has many advantages denied by the regular stage play.

9. It can present ideas with extreme simplicity - without elaborate scenery or costume - yet effectively.

10. Distracting details are eliminated so that attention is focussed on the dramatised experience itself.

11. Puppet shows are simple, direct and unencumbered by detail.

12. This form of drama can be used to marked advantage at all levels - school, university - adult education. Universities offer courses in puppetry - used in museums libraries.

13. Traditional importance of puppets - effective media of communication - folk lore, folk songs, folk dances.

Advantages of puppetry:

1. I can fit in where types of dramas not easily presented with human actors.

2. Where adaptation of classic plays is difficult.

3. Development of fantasy - experiments in satire - irony, sarcasm.

4. It is flexible enough to suit the experience and abilities of students at all levels.

5. Puppets cost very little - in time, money, costume, scenery and equipment.

6. Effective as a class room-device.

7. Especially suitable for villages.

8. Fewer people are involved in the production.

9. Parts need not be memorised but may be read.

10. Play may be presented with minimum rehearsal.

11. The stage takes very little space.

12. It develops creative ability and learning in languages and fine arts.

13. It develops skills in the subject-matter areas.

14. It develops effective listening and looking skills.

Limitations:

1. Visibility.

2. Audience - background.

3. Sound - audibility.

4. Movement - limited two or three.

5. Same puppet cannot be used for different characters.

6. No facial expression.

7. Same voices become monotonous.

8. Very little action.

9. Some talent and skill needed.

Types of puppets:

1. Glove or hand puppet: The puppet's head is operated on the forefinger of the puppet-eer, the little finger and thumb being used to animate the puppet hands.

2. Marionettes or string puppets: Operated from above by means of strings. In general they are more difficult to make an d operate than the other types.

3. Rod puppets: Flat cut out figures tacked to a stick with one or more movable parts and operated from below the stage level by wire rods or slender sticks.

4. Shadow puppets: Flat black silhouettes cut from light weight card board and shown behind a lighted screen of muslin, paper etc.

Essential principles in choosing a puppet play for teaching:

1. Do not use puppets when you have other better dramatic means easier to present a whimsical subject with puppets.

2. Puppet plays must be based on action rather than words.

3. Keep the plays short. Best suited to brief, crisp playlets.

4. Do not omit music and dancing as part of the puppet show. Heavy solemn music not suitable.

5. Adopt the puppet show in all respects to your audience - age background - tastes.

6. Do not hesitate to adapt the puppet play - puppeteers give chance to audience to participate.

7. Voice of different puppets should be different.

How to write a puppet play:

1. Choose the lesson you wish to teach - Do not try to teach too much at one time?

2. Illustrate the lesson by a story.

3. The story must have dramatic value.

4. Choose characters that are distinctive - best effect bring out their main characteristics - usually two puppeteers can act as four charactors.

5. Charactors never change costume.

6. Have no silent pauses.

7. Have a quick dialogue.

8. Have short speeches.

9. Have short scenes.

10. Have lots of action - depending on skill of puppeteer.

11. Wit and humour should be introduced.

12. Music songs and poems if not too long can be introduced.

13. Bring in every day people and familiar situations.

14. Remember the audience comes to be entertained and will stay only to be entertained.

15. Take the audience into your confidence - Do not preach at it and bore it.

16. Dialogues should be in local language, local slang local example.

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P O S T E R S

C.L. Gupta

A poster is a representation of one broad idea with the help of drawings, pictures and a few catch words.

Objectives:

The main objectives behind the use of a poster are:

1. To acquaint the people with better standards.
2. To create interest in a wider range of people.
3. To induce people to adopt better practices.
4. To promote undestanding and create goodwill towards extension.

Advantages:

1. It attracts attention.
2. It tells its story at a glance and conveys the message quickly.
3. It develops an awareness about the message.
4. It makes an emotional impact.
5. It has an imaginative appeal.
6. It caters to a mixed group.
7. It promotes creative abilities.
8. It can stimulate competitive spirit when used for that purpose.
9. It can be utilised to create a market for certain products.

Limitations:

1. It requires much prepration and investment.
2. It cannot be used repeatedly at the same place without making substantial changes.

3. It does not land itself to all topics.

4. It cannot represent all the phases of work.

Main principles of poster making;

1. It must be designed so as to be understood instantly. Therefore, it must have:-

a. A few catchwords.

b. A few illustrations.

c. Simple and bold letters.

avoid:

a. Fancy lettering style.

b. Division of sbgans into many units.

This will make the poster more legible and pleasing to the eye.

2. Idea: To be effective, a poster should have an emotional appeal. Visualise the idea in such a manner that it may appeal to a basic human emotion, in both drawing and text. This will have a losting impression on the viewers.

3. Layout: The layout is the blue print for your poster design. It decides the final appearance of the poster. It should be simple and impressive.

4. Colour: A good colour scheme has irresistible charm and universal appeal. It definitely helps in attracting attention and is the best method of emphasising a particular point. There should be proper contrast in the colours. Too many colours are distracting.

5. Use realistic pictures in your posters as they are better understood than symbolic pictures.

Poster sizes: Poster sizes usually conform to the standard paper sizes available such as 10"x15", 15"x20", 20"x30", 30"x40",18"x 22", 17"x27", 22"x28". These sizes can be used horizontally or vertically as desired, to suit your subject-matter and your display space.

FIELD PROBLEMS

This aspect of the programme has been introduced with a specific purpose to help the group of A.E.Os to present its experiences and views regarding such problems that are common to them. After the details of the training programme have been introduced the participants are given this opportunity so that they could collect their thoughts about matters connected with the Extension programmes. A suggestive outline is provided to each participant to give his views on the various aspects of his work. Emphasis is given to the practical experiences, achievements and shortfalls that the Extension Officer has faced during his work in the field.

One of the main objective in providing this opportunity of discussing field problems is to help each Extension Officer to develop the technique and skill in presenting his ideas precisely and effectively to the group. During the period of their stay importance is given to oral communication as one of the techniques which need to be developed by each Extension Officer. A talk is given to the group on effective speaking and the essentials of communication through leading discussions, presenting views in conferences, addressing farmers groups etc. During the various activities at the campus several opportunities are provided to the participants to present their views in an effective manner to the entire group. The first opportunity is this presentation of the field problems.

This item of the training programme brings the participants closer to each other. By discussing mutual problems they feel there is something common between them. It is interesting to get information regarding the methods of approach, the achievements and the failures in Extension. As the groups are from different States such presentations help the participants of other States to get an insight into various extension approaches. Through discussions and mutual exchange of views a feeling of confidence is created among the Extension officers.

Through these presentations the areas in which they feel that more attention is necessary are selected and included in the programme. This group pointed out that they would require more opportunities to use Extension Methods in realistic situations. They also suggested that they would prefer to have more information about agricultural implements. They were interested in the use and handling of such equipment that could be demonstrated in village conditions. They were also interested in having the latest

information regarding plant protection methods and types of insecticides and implements suitable for these methods.

One of the highlights that these field officers always tend to bring in each course is the administrative difficulties and lack of coordination in the Block. Most of them have complained about the V.L.W. is usually not under their control. They have specifically pointed out that it is difficult to conduct campaigns and other items in the agricultural production programme without the effective assistance of the V.L.W. Regarding supervision and guidance they felt it is not possible because of the lack of control over the V.L.W who is directly under the Block Development Officer.

Most of them have pointed out the growing indifference and lack of interest on behalf of the farmers in extension programmes, especially campaigns and demonstrations. They pointed out that the direct cause for this is the lack of coordination, lack of facilities and the defective supply line.

Most of them have laid emphasis on the service opportunities; the lack of incentives and chances for promotion; the uneven pay scales of the same positions in the same States; and the pressure of paper work.

The views of the Extension Officers have been summarised under each head in the following pages. The object of collecting these views is to bring them to the notice of their respective Blocks and State Governments.

FIELD PROBLEMS

A. SUBJECT-MATTER:
(Area of deficiencies in: content, audio-visual aids, research results, government publications and official directives).

None of the 27 participants have made any comment regarding the areas of deficiency in the subject-matter field. Most of the participants have stated that they do not have any facilities for Audio-visual Aids. Very few have pointed out that they have a Projector/ Magic Lantern and a few slides which are not very useful. Some have mentioned that the Audio-visual equipment that is available is not in good condition. Some of them stated that visuals such as charts and posters have been provided to the Blocks but they are not readily available to the A.E.Os.

Research Results:- More than half of the group has stated that the research results are not being provided to them. Some of them have mentioned that even if these results are made available they are either too late or not applicable to local conditions. Some of the comments in this regard have been that the A.E.Os do appreciate the results of research but do not have time nor the facilities to make use of them. Very few of them have accepted that research results are readily available to them. One of the suggestions made is that these results of research should be first experimented in the Block Seed Farms so that the A.E.O can get technical knowledge himself before advocating them to the farmers.

Publications:- Most of them mentioned that there is no problem in receiving the publications and circulars. They have suggested that these publications should be received in the local language.

Official directives:- The group has mentioned that there are no problems in this direction.

B. ORGANISATION:
(What are some of the problems encountered in organising activities connected with Agricultural Extension programmes, campaigns etc?)

Most of the participants have

brought out the problems of lack of coordination in their programmes especially in conducting campaigns. They have stated that they do not get adequate cooperation from the Block Development Officer nor the other Extension Officers of the Block. They have also commented upon the lack of interest on behalf of the village leaders and Panchayat Samitis.

Some of them have felt that due to unrealistic targets they face problems in making extension programmes practical and useful.

Most of them have brought out the problem of heavy paper work in preparing reports for which considerable time is wasted. Among the problems encountered in organising activities they have brought out the lack of storage facilities, inadequate means of transportation, untimely supply of credit facilities, seeds and pesticides and lack of irrigation facilities. They have pointed out that due to a defective supply line the cultivators have lost interest in Agricultural Extension programmes. Some of them have remarked that they do not get the assistance of the V.L.W in such programmes due to the other duties allotted to the V.L.W. by the Block Development Officer. Among the suggestions made to improve the situation the complete delegation of powers as far as agriculture is concerned to the A.E.Os has been stressed by some of the participants. Some of them have suggested that all the Extension Officers should be under the direct control of the Block Develoment Officer which would help to bring about better coordination. The low scales of pay and the difference of pay scales of the same posts in the same State have been a deterrant to efficient working.

C. SUPERVISION, EVALUATION:

(What are some of the problems encountered in connection with guidance, supervision and evaluation of Gramsevaks in your Block?).

Except for two participants all the others have stated that they have very little control over the V.L.W. due to the multifarious responsibilities attached to the V.L.W. The A.E.Os get very little opportunity to either evaluate or supervise the work of the V.L.W. Some have pointed out that supervision of the Gramsevak is very difficult because they are

under the direct control of the Block Development Officer. Some have remarked that it is not possible to supervise the work of the V.L.W. because of the political influence he has in his area. The suggestions made to improve the situation is that the V.L.W. should be placed under the direct control of the A.E.Os especially in functions connected with the agricultural production.

D. COORDINATION:

(Have you had any problem in coordination with other team officers and State Officers?)

Out of the group four participants have mentioned that they do not face any problem so far as the coordination is concerned. The others have complained of lack of coordination on behalf of the other Team Officers, Tehsil Staff, the non-officials, the Irrigation Department, the B&R Department, the Cooperative Inspector and the Veterinary Department. No suggestions have been made to bring about better coordination except a comment by one of the participants that coordination depends on mutual relationship between the officers concerned.

E. EXTENSION METHODS:

(As an Extension Worker what are the Extension Methods you have used?)

(Which of these methods were successfully? In what kind of situations and groups?)

(Which of these methods have failed - reasons and causes?)

Among the Extension Methods used very few have been mentioned by the participants. Some have listed out the aids and have not expressed their opinion regarding their effectiveness. Very few have mentioned the methods that have failed. Among the most effective method experienced by them is the individual contact. A majority of them have also shown confidence in demonstations. Regarding discussions they have remarked that the general tendency of villagers is to avoid attending meetings. Quite a few of them have mentioned that group discussions have failed due to differences in the interest groups. The most successful methods stated by a majority of the participants are personal contacts and method demonstrations.

VILLAGE PRACTICALS

Village practicals form an important part of the training programme for the Agricultural Extension Officers who come to the Institute for six week training in Extension methods and techniques. During these practicals the participants get an opportunity to practice the principles that have been taught in the class room and practised during campus practicals. Village practicals give an opportunity for them to try the different methods. For this purpose specific assignments were fixed keeping in view the time of their stay, the season, the crops that are grown in the area, the requirements of the farmers and the size of the group.

The following assignments were fixed for the participants during the village practicals:

1. Village agricultural production plan.
2. Farm production plan.
3. Method demonstration.
4. Composite demonstration.
5. Case studies.
6. Communication media survey.
7. Film appreciation.
8. Projects: a) Kitchen garden
   b) Youth clubs.

The whole group of 27 participants was divided into three groups. The first group consisted of more members because the village allotted was bigger. The rest of the group was equally divided among the other two villages. The village Jhanjhari and Dadupur are fairly small size villages. The details of the groups allotted for three villages are as follows:

GROUP NO.I

	Name of village	Consultant
1. Sh. L.N.Trisal	Shamgarh	Sh.C.L.Gupta
2. " S.V.Singh		
3. " P.S.Chauhan		
4. " Shiv Singh		
5. " Ramesh Chandra		
6. " A.N.Singh		
7. " G.P.Mukherjee		
8. " D.S.Sharma		
9. " S.S.Dhake		
10. " N.L.Sharma		
11. " S.S.Bhadauria		

GROUP NO.II

1.	Sh.A.Srivastava	Dadupur	Sh.H.Mahabaleshwariah
2.	" R.L.Meena		
3.	" V.P.Tewari		
4.	" S.B.Singh		
5.	" N.P.Tewari		
6.	" S.N.Dixit		
7.	" A.K.Chandra		
8.	" J.S.Singhal		

GROUP NO.III

1.	" Bashir Ahmed	Jhanjhari	" R.D.Kaushik
2.	" K.G.Roy		
3.	" Narsingh Dan		
4.	" S.S.Sharma		
5.	" U.N.Rai		
6.	" J.Prasad		
7.	" R.B.Singh		
8.	" R.S.Baswani		

Before going to the villages for stay the group made pilot visit to the villages for one afternoon. During their pilot visit they were able to get an idea of the problems of the village, possibilities of conducting method demonstrations, they fairly selected farmers for preparing farm production plans, probable case studies to be taken up were also thought of and they also selected the farmers for kitchen garden purpose. This pilot visit helped them to acquire the materials required for method demonstration, kitchen garden etc. well in advance. They went prepared with implements, seeds etc. to stay in the villages for village practicals.

Performance:

The performance of each group is as follows:

Group No.1 · Shamgarh

1. Village production plan - one
2. Farm production plan - three
   - i) Sh.Bikhu Ram - 4 acres
   - ii) " Badhoa Ram - 10 "
   - iii) " Teloo Ram - 10 "
3. Communication media survey - one
4. Film appreciation - one
5. Case study - one

Youth club

6- Method demonstrations:

i) Rogueing in wheat

ii) Sugarcane sowing

iii) Selection of sugarcanesetts for sowin

iv) Whool hand hoe

v) Village Volunteer Force tool set

vi) Use of hand hoe with ridger

7. Kitchen garden - three farmers

Group No.2 - Dadupur

1. Kitchen garden project - "

2. Farm production plans - three

i) Sh.Chandan Ram - 21 acres
ii) " Budh Ram - 16 "
iii) " Baru Ram - 12 "

3. Method demonstrations - four

i) Control of rats by zinc phosphide

ii) Selection of sugarcane seed for sowing

iii) Dusting of B.H.C. in sugarcane plot before sowing

iv) Eradication of smut in wheat crop (rogueing).

4. Case study - one

i) Why fertilizers are not used in all plots.

5. Village agriculture production plan - one

6. Organisation of youth club attempted.

7. Film appreciation:

i) Bhakra Nangal
ii) Safe use of pesticides

Group No.3 - Jhanjhari

1. Village production plan - one
2. Farm production plan - two
   i) 10 acres.
   ii) 13 "
3. Film appreciation
4. Method demonstration - four
   i) Composite demonstration of sugarcane (sowing, treatment etc.)
   ii) Rat control by zinc phosphate.
   iii) Preparation of compost pit by filling.
   iv) Basal dressing of super phosphate in sugarcane
5. Kitchen garden - three farmers
6. Case study - one
   i) The work done by the members of youth club as regards agriculture.

Reactions of the farmers:

There has been a variety of reaactions of the farmers towards the village peacticals. One farmer at Dadupur felt that the farm production plan is only a paper plan. Actually he expects all material and equipment from the government. At the same time at village Jhanjhari one farmer who took keen interest says "I do not want any material help" but he expects only reliable information to be given in farming regarding improved practices and techniques in increasing agricultural production. The group came across a third type of farmer at Shamgarh. When the farmer was explained about the improved method of sugarcane cultivation he agreed to adopt it but he wanted little help from the Government and he is also ready to spend something from his side. He took interest in the farm production plan and he has promised the group to implement it.

The farmers expect ready and tangible results in short time. The common tendency is to expect complete aid from the Government agencies. Such mixed reactions were observed in all these three villages.

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VILLAGE AGRICULTURAL PRODUCTION PLAN

During village practices the participants were given two types of assignments; (a) individual and (b) group. Among group assignments the village Agricultural Production Plan was included. The previous plan was to be examined to know to what extent it has been implemented and to what extent people know about it. Before proceeding to the villages the detail of the plan and the method of preparing it were taken up through a series of talks and discussions.

In order to make the approach towards the village production plan practical the actual plans of the Nilokheri Block were obtained for this purpose. Even in the discussions of the village production plan the proforma used by the Punjab Government was discussed before the participants. This made it convenient for the participants to undertake the practicals in the villages. The group was entrusted with studying the impact of the previous village production plans. They were required to discuss the plan for the village and also visit the places where there could be any evidence of implementation of these plans. They were given the assignment of improving the previous village production plan and to make their suggestions after studying the village conditions and collect necessary data. This process has given a deep understanding of the working of the plans to the participants. The Block Development Officer and his staff were requested to help the participants in this assignment.

Findings of the groups on the extent of implementation of the plan in the past:

1. Jhanjari:- In the village Jhanjari the plan was prepared for the year 1965-66. The following persons were invited for the preparation of the plan, and formed the production plan committee.

1. Shri Jai Singh - Sarpanch.
2. Shri Amar Singh - Panch.
3. Shri Seva Ram - Progressive farmer.
4. Shri Raja Ram - Progressive farmer.
5. Shri Banarsi - Progressive farmer.
6. Village Level Worker.

At first the committee discussed the achievements and targets for the year 1964-65. No proper plan was framed out for the year 1964-65, hence it was very difficult to compare the targets and achievements.

2. Dadupur:- The plan was prepared in consultation with Sarpanch and a few farmers but Sarpanch stated that the details of the plan he is not aware of them. The feeling given by them is that they know little about village agricultural production plan.

3. Shamgarh:- The group contacted with Sarpanch regarding production plan and he was requested to explain the formulation of Agricultural Production Plan which had been prepared in previous years for the village. But he expressed that production plan for the year 1964-65 for this panchayat was not drawn and he also stated that there is no separate committee for Agricultural production programme. As far as the concerned Sarpanch knows that panchayat was not consulted for formulation of the plan. Under such situations it is very difficult to assess the progress of the existing plan.

The participants have also come to know from the villagers that the efforts were not made previously for execution of the plan in the earnest way.

This attempt of examining the previous plan has helped them to find out the lacunas in the implementation aspect of the plan. This type of assignment, it is hoped will help them to have a clear understanding of the problems that they have to face in the field situation.

VILLAGE AGRICULTURAL PRODUCTION PLAN OF SHAMGARH 1965-66.

1. The Production Plan of the village Shamgarh for the year 1965-66 was drawn up during the village practical according to the felt needs of the villagers. The basic data were supplied from the Block, Nilokheri District Karnal. This village is situated near G.T. Road. The production plan for 1965-66 has been prepared with the consultation of Sarpanch, Panch, V.L.W. and progressive cultivators.

2. Requirement of different foods for the villagers:

S.No.	Name.	Required quantity per year.	Available in the village.	Balance.
1.	Cereals.	483 tons.	1450 tons.	967 tons.
2.	Vegetables.	102 "	236 "	134 "

3. Analysis of existing situation and the requirements.

a. Cereals:- This village is self sufficient with regard to cereals. The extra quantity of 967 tons is sold in the adjoining markets.

b. Pulses:- In this respect also the village is not self sufficient. The requirement of pulses can be met by growing some area under pulses.

c. Vegetable:- In this village only potato and onion are produced in sufficient quantity. Nearly 50% of the total production is used for house consumption and the rest is sold in the near market. There is great need for leafy and other type of vegetables. There are good irrigation facilities in this village and hence the shortage of other vegetables can be met by increasing the area under other type of vegetables. The special attention is required for the encouragement of kitchen garden. In this way we would like to suggest that the improved seeds of summar and winter vegetables should be distributed through the block agency.

:-Fruits:- As far as the production of fruits is concerned in this village, it falls short of demand. Only lemon and guavas are grown in very small area. Even those plants are not properly maintained. To meet the demand of fruits can easily be increased. The fruit plants may be supplied to the cultivators to increase the production of fruits. There is only one garden.

Milk:- There is no problem of the milk in the village. Some of the extra quantity of the milk is being sold as fresh milk to the adjoining market and the remaining quantity is converted into ghee and other milk products.

Poultry:- There is a great scope for the introduction of improved type of poultry e.g. white leg horn birds etc. More we headistributed to the interested cultivators. There are two poultry farms in this village.

Organic manure:- Nearly 40% of the F.Y.M. produced is utilised as fuel in the shape of cow dung cakes. The shortage of organic manure can be met with by preparation of compost and using of green manure.

Inorganic manure:- In order to get better yeild, the use of inorganic manures (chemical fertilizers) in combination with organic manures is entirely essential. At present the consumption of fertilizers is good but the supply of the chemical fertilizers are not upto the demand of the farmers. So the supply of fertilizers should be made available to the farmer as per their requirements well in advance.

Improved Implements:- Majority of the peasants are using the indigenous ploughs etc. The use of soil turning ploughs needs encouragement and they may be popularised by giving the method demonstrations by the block concerned. We have come to know from the method demonstrations of Agricultural Implements in the village Shamgarh that some implements

such as wheel hand hoe and multipurpose hoe are very useful to the cultivators in the intercultural operations. In this way we would like to say that the method demonstrations will be shown to the cultivators. There are 4 tractors in this village well equipped with farm machineries.

Feed and fodder:- In this village nearly 600 acres is under fodder crops (Berseem and Jowar). This combine with the dry fodder obtained from wheat and paddy and sugarcane tops, sufficies the need in full of the present cattle

Animal power:- The villagers pay more heed to the milch cattle rather than bullocks in their proper and concentrated feed.

Education:- There are following educational facilities in this village.

1. Govt. Primary School.
2. Govt. Middle School-120 students.
3. Child Welfare Centre one - 35 boys.

Health and Sanitation: The sanitation work in this village is not satisfactory. The work is still incomplete due to which at one end it has created a great nuisance in front of the Harijan Mohalla. The open drains are not being cleaned regularly. The compost pits are very near to the village itself.

Panchayats:- There is one panchayat with 7 members and one sarpanch. The responsibility of cleaning and maintaining the roads, disinfection of wells also goes to the Panchayat.

Cooperatives:- Two Service Cooperative Societies consisting of 75 members are also functioning there. The main function of the society are:

1. Distribution of short term loan.
2. Distribution of fertilizers on cash basis.

Suggestions:- About 40% of the cow dung is used here as fuel at present. The shortage of compost and F.Y.M can be met by making the compost of I.Pomea Carmea, which is prevalent in this village.

There should be arrangement for the sale of inorganic manure in Cooperative Society so that the farmer may get the fertilizer easily and in time.

. Demonstration:

To increase the production it is necessary that more method and Result demonstrations should be conducted by the block staff specially the following:-

1. Use of green manure in wheat.
2. Japanese method of paddy cultivation.
3. Line sowing of crops.
4. Use of inorganic manures e.g. P_2O_5 and Calcium Ammonium Nitrate.
5. Seed treatment by agrosan GN to protect seed borne diseases.
6. Use of insecticides.
7. Use of ridge maker and seed drill paddy weeder and other intercultural implements etc.

. Implements:-

Some of the costly implements like alpod thresher, seed drill etc. may be purchased by the Cooperative Society because these costly implements can not be purchased by ordinary farmer but they can get on rent basis from Coop. Society. One drill can easily give an average of 5 acres per day for sowing. The improved agricultural implements should be distributed to the cultivators on the subsidised rate.

Panchayat:-

The incomplete work should be completed as soon as possible. One part-time sweeper may be engaged to clean the drains.

Water-logged area:-

There is great problem in the village of water logging so that deep water paddy should be grown. Area adjoining the irrigation channels is water logged and hence no crop can be grown successfully here. The deep water variety of paddy may be tried in these areas on experimental basis.

Problems of Alkaline land and loose smut:

This problem is very serious over here. and day by day it increases more alkalinity in the

cultivated lands. In this way we suggest the following crop rotations to reducing the alkaline soil.

1. Dhencha, Paddy and Berseem.

Area under alkaline land is increasing gradually due to rising of water table. This problem may be tackled at Government level.

Many fields of wheat were visited and found a great attack of loose smut in wheat crops. The seed treatment and resistant variety should be used to reduce the attack of smut.

Formulation of Agricultural Production Plan and Review of Progress for 1964-65:

We contacted with Sarpanch, Gram Panchayat Shamgarh regarding production plan and he was requested to explain the formulation of Agricultural Production plan which had been prepared in previous years for the village Shamgarh. But he expressed that Production Plan for the year 1964-65 for this Panchayat was not drawn and he also stated that there is no separate committee for Agricultural Production Programme. As far as the concerned Sarpanch knows that Panchayat was not consulted for formulation plan. This is only done by the V.L.W. In this way it is rather difficult to assess the progress of the existing plan.

As we have come to know from the contact of the villagers that the efforts were not made previously for execution of the plan in the earnest way.

In the end we would like to suggest that the production plan should be prepared in realistic manner and the execution of plan must be done by the block staff.

FARM PRODUCTION PLAN

The preparation of Farm production plans forms an important item for Agricultural Extension Officers. The Agricultural Extension Officers during their training for 6 weeks in the Institute are expected to get a clear understanding of the preparation of farm production plans. As the emphasis of the work of the Village Level Workers is on increasing agricultural production it was felt that Agricultural Extension Officers should have the knowledge of the preparation and significance of these plans. In the syllabus a series of talks and discussions have been included on this topic. The trainees were also given an opportunity of understanding a simplified proforma for this purpose. In order to give the trainees more practice in preparing farm production plans this item has been included in the assignments during village practicals. The trainees were told to proceed step by step, first with partial budgeting of the farm business where only part of the farm business is taken for suggesting improvements to be introduced on the farm. For this purpose they were also told as to how to work out a package of practices for different enterprises and package of practices for two crops. Paddy and wheat were selected for which ready information was given to them which is applicable to the area selected for village practicals. This process provided an opportunity to the trainees to learn how to contact the farmers and how to convince them of certain improved practices. The collection of data from each individual farmer is a long and difficult process. The experience of reducing the information to the items included in the proforma after calculations is extremely useful to the trainees. They were able to make suggestions after obtaining all the necessary information from the farmers. They also worked out an alternative plan in consultation with the farmer. By this process the farmers too were able to get an over all picture of their farm business.

No. of farm plans prepared:

The trainees in all the three villages prepared the farm production plans of farmers having different holdings. The details are as follows:-

1. Shamgarh:-

   a. 10 acres holding.
   b. 4 acres holding.
   c. 10 acres holding.

2. Dadupur:-

a. 17 acres holding.
b. 12 acres holding.
c. 16 acres holding.

3. Jhanjari:-

a. 13 acres holding.
b. 6 acres holding.

Problems faced by the participants:

1. Farmers did not show much interest in Farm plans because they do not get any material benefit.

2. The trainees had difficulty in getting correct information from the farmers. This was a common problem with every group. The farmers do not keep any records. In the absence of records it is difficult to obtain accurate information.

3. Lack of supplies based on the suggestions made in the plan proved to be a deterrent:

How far the Farm plans are realistic?

As regards the quality of the farm plans the recommendations made in the plan are with in the reach of the farmer and they are the recommendations of the department for this area. The suggestions no doubt will improve the farm business and help the farmers to get more returns.

A few samples of the three farm production plans are given in the following pages.

FARM PRODUCTION PLAN

1. Name of cultivator. Sh. Bikha Ram Singh..
2. Name of village. Sh. Shamgarh.
3. Total area of the holding. 4 acres.
4. Area under cultivation. 4 acres.

I. Present Situation:

Shri Bikha Ram Singh, aged 45 years is an active and enthusiastic cultivator. He is an intelligent farmer with a scientific reasoning. He attends to the Agricultural activities all the year round.and is helped by his four family members. He does not employ any permanent labour, but during peak season he employes one labourer. One of his sons is undergoing training in Navy. The female members do not attend farming, except his wife who attend to their cattle regularly.

The area under cultivation is 4 acres, which are owned by the cultivator himself. He works well on a landlords holding on 50% basis. Out of this he receives net income of Rs. 1000.00 per annum only. The main source of irrigation is a tubewell installed on his farm, the pump is shared by four cultivators, including Zamindar Shri Bikha Ram. All the four acres of land receive irrigation.

Shri Bikha Ram Singh possesses 8 live heads of cattle, costing about Rs.2600.00 only. The milk produced is consumed in the household and is not sold. The fodder produced at the farm is used by the cattle. The cultivator uses his domestic manures and uses a little quantity Nitrogenous Fertilizers(C.A.N). The standard of living is average under village condition.

Shri Bikha Ram Singh has the following assets and liabilities:

Total assets	Rs. 24781.00
Total liabilities.	Rs. 1200.00
Net worth.	Rs. 23581.00

The following crops are sown at present in the farm:-

Name of the crop.	Yield per acre.
1. Paddy.	40.0 Mds.
2. Wheat.	15.0 Mds.
3. Sugarcane.	600.0 Mds.
4. Maize.	25.0 Mds.
5. Berseem.	800.0 Mds.

Usually two crops are taken in one year. But the sequence of rotation is not scientific, the analysis of the original plan is as under:-

S.No.	Name of the crop.	Area under crop.	Production Mds. Seers.	Price per unit. Rs.	Value Rs.
1.	Paddy.	1.5	60. 00	13.00	780.00
2.	Wheat.	2.0	30. 00	20.00	600.00
3.	Sugarcane.	.25	7. 00 (Gur)	20.00	140.00
4.	Maize.	2.00	50. 00	16.00	800.00
5.	Berseem.	.75	300. 00	1.00	300.00
				Total.....	3020. 00

	Quantity sold. Mds.	Receipt Rs.
1.	30.0	390.00
2.	-	-
3.	-	-
4.	10	160.00
5.	-	-
Total.....		550.00

It is clear from the above table that a bulk of production is used for home and fodder consumption and only worth Rs. 550.00 is being sold.

Summary of the farm income is under:-

a. Cash receipts:

i. sale of crops.	Rs. 550.00
ii. Other income .	Rs. 1000.00
	Rs. 1550.00

b. Recurring expenditure: Rs. 2500.00

Remainder Rs. 1050.00

Depreciation @ 2%. Rs. 290.00

Farm income. Rs. 760.00

The net farm income of Shri Bikha Ram is Rs. 760.00, including his an additional other income Rs. 1000.00. The other income derived from is mentioned above.

II. Weakness of the Plan:

1. There is a shortage of humane labour in the village, especially in the peak season.

2. The quality of the compost produced is not good, nor the method itself is satisfactory.

3. The farmer does not use sufficient or normal quantities of inorganic fertilizers. Even CAN is not used in sufficient quantity, Superphosphate is unknown to the farmer. Ho does not use even green manure.

4. The farmer does not follow improved agricultural practices i.e. sufficient number of weedings in paddy. Plant Protection measures.

III. Improvements Suggested.

1. Better utilisation of land by rational sequence in rotation.

2. Increase in area in sugarcane from ¼ acres to one acre and in paddy from 1½ to 2 acres.

3. Use of sufficient quantity of fertilizer in the recommended proportion.

4. Better methods of preserving F.Y.M, and composting.

5. Improved varieties of sugarcane wheat and gram, introduction.

IV. Probable income and expenditure under alternative plan.

Crops.	Acres.	Qty. produced (maunds).	Qty. used on farm (Maunds).	Qty. for sale. (Maunds).	Price per unit Rs.	Total receipt. Rs.
A. Kharif:						
1. Paddy.	2	100	30	70	14.	980.
2. Sugarcane.	1	1200	200	1000	2.	2000.
3. Maize.	5	12	3	10	16.	160.
4. Jowar.	5	250	Fodder.	....	..	Nil.
5.					..	Nil.
Rabi:						
5. Berseem.	5	170	Fodder.....		..	Nil.
6. Wheat.	1	22.	22.	..	20.	200.
7. Gram.	1	15.	5	10		3340.00

From the above analysis it is clear that the total receipts from the sale of crops will be Rs.3340.00. To this the income from the other source will be Rs. 1000.00 (as explained earlier). Thus the total income will be Rs. 4340.00. After deducting the expenditure incurred which is Rs.947.00 and depreciation @2% of the fixed capital (Rs.295.00) the net income of the cultivator, Shri Bikha Ram will be Rs. 3098.00 P.

Comparison:	Present plan(Rs.)	Alternative plan.(Rs.)
1. Total cash receipts.	1550.00	4340.00
2. Total cash expenses.	500.00	947.00
3. Remainder.	1050.00	3393.00

It is clear from the above comparison that the farmer will get an additional amount of Rs. 3098.00 P, as a result of the adoption of above practices. The farmer is willing and enthusiastic and he will leave no stone unturned in achieving the above results.

But more depends on the follow up by the Block staff, A.E.O and V.L.W. in particular. They should render him guidance and should make available the timely supplies fertilizers,& plant protection materials.

FARM PRODUCTION PLAN:

1. Name of cultivator - Shri Chandan Ram.

2. Age - 50 years.

3. Total area of holding - a) Owned - 17 acres.
   - b) Rented - 4 acres.

4. Area under cultivation - 21 acres.

5. No: of family members - 18.

I- Present situation :-

Shri Chandan Ram aged 50 years is an active and enterprising cultivator in spite of his advancing age, he attends to the field operations timely and is helped in his job by his four sons who are also devoted to this job. There is also one permanent labourer attached to the farm to help them on carrying out day to day operations. The house-hold consists of 18 members and it is a happy joint family. One of the sons of Shri Chandan Ram is an Agricultural Graduate who is an employee of Punjab Government in State Agriculture Department. Female members of the house-hold also help the males in farm operations but their contribution/farm income is comparatively less.

The area under cultivation is 21 acres out of which 17 acres are owned by Shri Chandan Ram and remaining 4 acres are cultivated on "batai". Out of 21 acres only 8 acres land is irrigated. The main source of irrigation is a well fitted with persian wheel. Shri Chandan Ram possesses 18 farm animals and they are as follows:-

Sr. No:	Name.	No:	Value in rupees.
1.	Bullocks	4	2000.00
2.	Cows for milk.	5	500.00
3.	Buffalo for milk.	3	1500.00
4.	Young cattle	4	1100.00
5.	Young buffalo.	2	120.00

The milk produced is utilized in home, only the milk products worth Rs.200/- are sold. Two out of four young cattles have been kept unnecessarily which can be sold for which cultivator was suggested. The cultivator agreed to the suggestion and will sell 2 young cattle during the new plan year. He was also advised to make best use of milk and milk products.

The cultivator uses his own manurial resources and among fertilizers only Kisan khad (C.A.N.) is used in small quantity. Nearly 50% of the cow-dung is made into dung-cakes and used for fuel. Cultivator was advised to supplement the organic manures with chemical fertilizer.

The general standard of living is good.

The position of the farmers is as follows:

Assets		Liabilities.	Net worth.
1. Livestock	-Rs.5220.00	-	-
2. Machines etc.	- 926.00	-	-
3. Farm land	- 38000.00	- Nil-	Rs.62996.00
4. Buildings and fences.	- 5000.00	-	-
5. Persian wheel-	600.00	-	-
6. Foods and supplies:	- 7250.00	-	-
7. Cash in hand	- 6000.00	-	-
Total:-	Rs.62996.00		

The following main crops are grown on the land:-

a) <u>Kharif</u>:- Paddy, Maize, Jowar, Cotton, Chillies etc.

b) <u>Rabi</u> : - Wheat, Gram, Sugarcane, Oats, Methi etc.

The average yield of the main crops is as follows:-

1. Wheat - 20 Mds.

2. Gram - 13 Mds.

3. Sugarcane - 850 Mds.

4. Maize - 13 Mds.

5. Bajra - 10 mds.

6. Paddy - 25 mds.

II - Summary of production and income - 1963-64:

Farm crops are the main source of income as shown in the table below:-

Crops	Area	Production	Price per unit.	Value.	Quantity sold	Receipts
					mds	
1. Wheat	10 acres	200 mds.	Rs.16.00	3200.00	100	
2. Gram	2 "	25 "	18.00	450.00	nil	
3. Wheat and gram.	4 "	50 "	16.00	800.00		
4. Sugarcane	1 "	850 "	2.00	1700.00	850	
5. Oats.	1 "	200 "	1.00	200.00	nil	nil
6. Methi.	0.5 "	50 "	1.00	50.00	nil	nil
7. Maize	2.00 "	18 "	20.00	360.00	9	180.00
8. Jowar.	2.00 "	400 "	1.00	400.00	nil	nil
		Total:-		Rs.7160.00		Rs.3480.00

It will be seen that major part of the total produce is utilized in home consumption and as cattle feed, and out of total production valued at Rs.7160.00 only the produce worth Rs. 3480.00 is sold.

The total cash income is Rs.3680/-. This includes income from sale of milk.

III- Weaknesses in the original plan:-

1. There is a shortage of human labour in the village specially during peak periods.

2. Irrigation water is in short supply. Out of 21 acres of land only 8 acres is double cropped area.

3. Even though the number of animals maintained is quite large, the practice of making farm yard manure or compost is not being satisfactorily adopted by the farmer. 50% of the cow dung is used as fuel by making dung cakes.

4. The farmer does not use fertilizer in appreciable amounts. Even C.A.N. is not being adequately used and the use of superphosphate is limited to a quite small area.

5. He does not adopt scientific methods of farming e.g. line sowing, hot weather cultivation, plant protection, measures etc. He does not use improved implements.

IV. Improvements suggested:

1. Better utilization of farm land has been suggested by converting the single cropped area to double cropped area. This will be possible by adopting the dry farming recommendations.

2. Increase in area under sugarcane from one acre to two acres.

3. To put 5 acres out of 7 acres for wheat during next rabi, under intensive cultivation programme according to recommendation made for wheat to raise the wheat produce. The main recommendations are as follows:-

1. Seed . a) Type - C.273.

b) Seed rate - 30 KG per acre.

2. Seed treatment - Solar treatment and seed dressing with agrosan G.N.

3. Organic manures:- 15 cartloads per acre of F.Y.M.

4. Fertilizers:-

a) C.A.N. - 100 KG
b) Superphosphate - 50 Kg. } per acre.

V. Plant protection - Spraying 2,4D when the crop is 6" in height.

VI. Intercultural operations:- One hoeing when required.

VII. Others:- Roguein of diseased plants.

VIII. Sowing :- By drilling at 9" distance depth of slowing - 2" , time - 15th October to 15th November.

Late sowing :- upto 15th December.

IX. Yield :- 30 Mds per acre.

4. It was suggested to raise the paddy crop in 2 acres during next season according to following recommendations-

(i) Seed a) Type - Basmati 370.

b) Seed rate - 10 Kg per acre.

ii) Seed treatment :- 25 grams Agrosan G.N. por acre.

iii) Organic manures:- 15 to 20 tons.

iv) Method of planting :- Transplanting by 8 labourers at the distance of 7" between lines and 6" from plant to plant.

V. Time of sowing - May - in nursery

June - Transplanting.

VI. Plant protection measures : - B.H.C. dusting @ 10 Kgs per acre.

VII. Intercultural practices - 2 to 3 hoeings.

VIII. Others - Irrigation 4 to 6 as and when necessary.

The total area under paddy during next kharif is proposed to be 8 acres. Yield of paddy in intensively cultivated area will be raised from 30 to 35 mds.

5. Utilization of cow dung for preparation of F.Y.M. and compost.

6. Introduction of improved varieties of wheat and paddy.

7. Better utilization and sale of milk and milk products.

Expected annual production and receipts from crops 1965-66.

Crops.	Acres.	Amount produced (Mds).	Amount used on farm (Mds)	Amount for sale	Price per unit	Total receipts.
a Kharif:						
1. Paddy.	8	280	80	200	13.00	2600.00
2. Sugarcane.	2	1700	1090	610	2.00	1220.00
3. Maize.	2	18	18	nil	nil	nil
4. Jowar.	2	400	400	nil	nil	nil
5. Guar.	1	10	10	nil	nil	nil
6. Chillies.	1/2	8	nil	8	24.00	192.00
7. Cotton.	1/2	3	2	1	50.00	50.00
b. Rabi.	-	Fallow 5 acres during Kharif.				
1. Wheat.	7	190	110	80	16.00	1280.00
2. Gram.	2	25	15	10	18.00	180.00
3. Wheat and gram.	8	100	100	nil	nil	nil
4. Methi.	1	200	200	nil	nil	nil
5. Masoor.	1	12	2	10	30	300.00

Yearly - Total:- Rs. 5822.00

V. Probable income and expenditure under alternative plan:-

Probable income under new plan is Rs.7522.00 and expenditure is Rs.3064.00. Thus resulting into Rs.4458.00 net income. Details of income and expenditure under new plan are shown in the table below:-

Cash receipts :

1. Crop sales - Rs.5822.00
2. Net sales of livestock Rs.1000.00
3. Sales of mil and milk products -Rs.700.00

Cash expenses:

1. Seed - 100.00
2. Fertilizers and maures - Rs. 934.00
3. Plant protection Rs.50.00
4. Livestock expenses - Rs.600.00
5. Water rate- Rs.250.00

6. Permanent labour Rs.780.00

7. Casual labour hired:- Rs.340.00

8. Miscellaneous:- Rs. 70.00

Total:- Rs. 7522.00 Rs. - 3064.00

Summary:-

1. Total cash receipts. - Rs. 7522.00
2. Total cash expenses. - Rs. 3064.00
3. Remainder. - Rs. 4458.00
4. Depreciation. - Rs. 472.00
5. Farm income. - Rs. 3986.00

Production requirements are as follows:-

1. Paddy (Basmati 370)	- 20 Kgs.	worth Rs.	10.00
2. Wheat seed(C273)	- 150 Kgs.	"	90.00
3. B.H.C. 10%	- 20 Kgs.	"	8.00
4. 2,4-D	- 7½ pound.	"	10.00
5. C.A.N.	- 700 Kgs.	"	217.00
6. Superphosphate.	- 450 Kg	"	103.00
7. Muriate of potash	- 140 Kg.	"	38.50

Total short term loan required Rs.481.50.

VI. Comparision -	Present plan	New plan.
1.Total cash receipts.	Rs.3680.00	Rs.7522.00
2. Total cash expenses:	1295.00	3064.00
3. Remainder.	2385.00	4458.00

Thus as a result of adoption of recommendations made the farmer will get additional income worth Rs. 2073.00 over the present plan.

VII. Reaction of the farmer: - Chandan Ram was ready an. to implement the same without hesitation. In the initial approach he raised certain questions and doubts.

He told that these farm plans are mere paper plans and once they are prepared, nobody cares for their implementation. Supplies namely fertilizers, pesticides and improved seeds are not made available easily and timely. There are certain problems in procuring them. Sometimes block authorities do not respond well. Pesticides namely agrosan G.N. Zince phosphide are distributed free of cost in principle but in practice they are not within the easy reach of ordinary farmer. It was assured to the farmer that V.L.W. of his circle will arrange for the timely supplies needed for the execution of this plan. Farmer also raised the problem of procuring the F.Y.M. in required quantity for the new plan but he was convinced through discussions to purchase the F. Y.M. from his village friends and apply to his farm. At last the farmer was fully convinced about the successful implementation of the new plan.

VIII - Visits :- Farmer was contacted for three days to get the full information and formulate the new plan. He did not spare more time for this purpose than one hour a day. However, he helped fairly well on the preparation of this plan.

IX. Problems faced:- The farmer do not maintain any farm accounts therefore there was difficulty in collecting the basic information regarding present plan. Wages to farm labour are paid partly in cash and partly in kind. It was difficult to assess the correct value of wages paid to casual labour in the light of payments made in kind. However, efforts were made to get correct information. Payments in kind changed to equivalent cash value. On the basis of prevalent cash wages paid to labour , amount of labour employed casually on the farm was calculated. There was no correct idea to the farmer regarding the amount of total farm produce consumed on the farm itself.

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FARM PRODUCTION PLAN

Name of cultivator. Sh. Teloo Ram Saini.

Village. Shamgarh.

Shri Teloo Ram of Shamgarh village in the Nilokheri Block is an enthusiastic farmer of 58 years age wh. is having 10 acres of land at one place. He has a very good joint family consisting of twelve members. On the farm his own son, one br. grandson work for 12 months and he has no permanent labour on his farm. But he generally used to engage 60 men days in whole year as temporary labour at the time of transplanting of Paddy as well as at the time of harvesting the crops. The female members and the young members of the family do not work on the farm but they attend to the cattle.

Present condition of the farm:

1. Land inventry and means of irrigation:

He has got 10 acres of land at one place in ten plots. The whole area is irrigated with Persian wheel which he shares with other cultivator.

2. Livestock inventry:- He has got 2 bullocks, 1 camle, 1 milch cow, 4 buffaloes, 2 young cattle, 2 young buffaloes, and the total value of livestock comes to Rs. 4750.00

3. Machines and tools:- The cultivator has got one bullock cart, 1 deshi plough, 2 yokes, 2 spades, 6 khurpis, 5 sickles, 1 chaff-cutter, 1 pata and 1 roller and the value of these tools and machines comes to Rs. 815.00

4. Buildings:- Shri Teloo Ram has got two buildings worth Rs. 12,000.00 in the village one for residence and another for cattle. Both buildings are pucca.

5. Summary of income and Expenditure for 1963-64.

He has sold 20 mds paddy, 20 mds wheat, 30 mds gram, 85 mds. gur and 5 mds cotton worth Rs. 1450.00. And he has sold milk for Rs. 600.00 hence he has got Rs. 2050.00 by sale of crops and milk.

He has spent Rs. 820.00 on the following items:-

1. Temporary hired labour	-	120.00
2. Fertilizers.	-	62.00
3. Repairs of machines.	-	20.00
4. Feed purchases	-	300.00
5. Land revenue	-	18.00
6. Building repairs.	-	300.00
		820.00

Summary total receipts - 2050.00

Total. expenses - 820.00

Net income - 1230.00

6. Formulation of New Plan for 1965-66.

Under the new plan it is proposed to grow two acres under paddy, one acre Hybrid Maize, two acres of Jowar fodder, 1 acre cotton and one acre Sugarcane and three acres under green manuring for Kharif. In Rabi season it is proposed to grow three acres wheat, 1 acre wheat+ gram, three acres gram ,1 acre potato and one acre of Berseem crop.

The following are the recommended practices for new plan.

Kharif crops:

	Paddy.	Maize.	Cotton.	Sugar-cane	Chari
1. Seed:					
a. Type.	Basmati 370	Hybrid	F216	C0312	Local
b. Seed rate.	10Kg per acre.	7 Kg.	8 Kg.	60Mds.	6 Kg.
2. Seed treatment.	Agrosan GN. Salt water treatment.	Agrosan GN.			Areton - treatment.
3. Organic manures.	10 cart load.	15 cart loads.	8 cart loads.	15 cart loads.	10 cart loads

	Paddy.	Maize.	Cotton.	Sugar-cane.	Chari
4. Fertilizers.					
a. Nitrogenous C.A.Nitrate.	60 Kg.	150kg.	20 kg.	150kg.	50 kg.
b. Phosphatic Superphosphate.	50kg	100kg.	-	-	-
5. Intercultural practices.	Weeding & Hoeing twice.	Three weeding one earthing.	Three weeding.	Weeding Hoeing Earthing.	Weeding.

Rabi Crops:

1. Seed:	Wheat	Potato
a. type.	C273	Red kufri
b. seed-rate	32kg.	8 Mds.
2. Seed-treatment.	Agrosan GN.	-
3. Organic manures.	10 cart load.	15 cart loads.
4. Fertilizers.		
a. Nitrogenous. C.A.Nitrate.	50 kg	100 kg.
b. Phosphatic Superphosphate.	40 kg.	80 kg.

Expected annual Production and receipts from crops due to adoption of new plan.

Crops.	Area	Amount produced Mds.	Amount used on farm Mds.	Amount for sale Mds.	Price per unit. Rs.	Total receipts. Rs.
1.Paddy.	2	80	40	40	16.00	640.00
2.Maize	1	50	40	10	15.00	150.00
3.Jowar (chari)	2	800	800	-	-	-
4.Cotton	1	15	5	10	30.00	300.00
5.Sugar-cane	1	80	30	50	20.00	1000.00
6.Wheat	3	78	45	33	80.00	660.00
7.Wheat+gram	1	25	-	-	-	-
8.Gram	3	90	50	40	20.00	800.00
9.Potato.	1	250	20	230	10.00	2300.00
10.Berseem.	1	400	400	-	-	-
				Total yearly receipts.		Rs.5250.00

Based on the above recommendations the requirements of the farmer from outside for seed fertilisers and insecticides are as follows.

Seed	225.00
Fertilizers.	344.80
Insecticides	35.00
	584.80

The total investment on the above items is Rs.584.80

From the sale of additional produce he will get the following income.

1. Crop sales.	Rs.5850.00
2. Milk sale.	Rs.1500.00
	7350.00

The total estimated expenses are as follows.

1. Seeds	225.00
2. Fertilizers.	344.80
3. Plant protection.	35.00
4. Temporary hired labour	200.00
5. Repaires of machines etc.	20.00
6. Feed purchases.	400.00
7. Land revenue	18.00
8. Repairing of buildings.	300.00
9. Purchase of soil turning plough.	22.00
	1562.80

Summary:	The total receipts.	7350.00
	Total expenses.	1562.80
	Net income.	5787.20

In present plan he has got Rs. 1230.00 as farm income while in new plan he will get Rs. 5787.20 as farm income. Hence he will get Rs. 4557.20 as extra income due to adoption of new plan.

During the new plan he will require a short term loan of Rs.604.80 for purchasing seed, fertilizers and pesticides.

METHOD DEMONSTRATION IN VILLAGES

The trainees were expected to conduct one method demonstration at the campus. To give it realistic and more practical situation it was considered desirable that some of the trainees may conduct their method demonstration in the village during their village practicals. Although it was not possible to give chance to each trainee to conduct his demonstration in the village but about 3-5 trainees per village conducted their demonstration before the villagers.

The items taken up for demonstration were the felt-need of the people at that particular time. Items such as sugarcane seed selection, Aretan treatment, B.H.C. application, bhindi growing, sugarcane sowing , composting, placement of fertilizer like superphosphate and mixtures, eradication of smut , Zinc phosphide baiting, use of hand hoe, use of ridger, use of sprayers and dusters etc. were selected for village demonstrations.

The demonstrators took following steps in respect of conducting their demonstration.

(a) Ascertained that topic selected by them is really topic of their need.

(b) Gave publicity in respect of item of demonstration, place, date and time.

(c) Collected proper material and equipment and rehearsed it.

(d) Collected sufficient number of farmers for witnessing the demonstration.

(e) Conducted demonstration properly.

(f) Gathered reaction of the cultivators in respect of utility, and suitability of the item and ability to the extent they could follow and improve their skill.

The general reaction of the farmers were that demonstration at proper time with the help of necessary material and equipment help in learning and acquiring skill. Many farmers during that/repeated certain /period operation like placement of fertilizer, aretan treatment, B.H.C. application etc.

The trainees also felt that this opportunity of providing realistic situation and all facilities of demonstration have mad their demonstrations effective. These demonstration have brought confidence in the trainees and they hope to repeat those in their own blocks when they go back to their work.

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COMPOSITE DEMONSTRATION ON SUGARCANE

Method demonstration or result demonstration in piece-meals are no doubt play their own role in Extension education programme but many a times fail to take the farmers to the final stage of adoption and continuance of the practice. Demonstrations where single factor is taken up, many a time fail to show significant increase in production. It is because of the fact that different aspects of production are inter-dependant on each other. Say for example the effect of hybrid maize cannot be shown in isolation but it has to be linked with other factors like type of soil, fertiliser application etc. In sugarcane also certain factors like fertiliser application, time and method of planting have to be linked with variatal demonstration.

The trainees during their village practicals besides several method demonstration laid out a composite demonstration on sugarcane cultivation as it was the proper season for its planting. The following factors were taken up in the demonstration

1. Varietal - replacement of Co 312 by Co J46.
2. Cane selection for seed - free from disease.
3. Seed treatment with Aretan for quick and more germination.
4. Soil treatment with BHC against white ant.
5. Planting distance from row to row - 2 ft.
6. Placement of sets in the rows - overlapping 1/4 of portion.
7. Fertilise application @ P205 - 40 lbs and N-100 lbs.

The trainees took following steps in laying out of demonstration:

1. Surveyed the whole village to find out sugarcane growers, practices followed by them, yield obtained and their reaction about the present state of affairs.

2. Selection of the farmer who can follow all the practices recommended and cooperate fully in publishing result of the demonstration.

3. Selection the field was made in respect of easy approach of most of the villagers and sowing can be done during their village practicals or near about.

4. The farmer was educated about the complete method and his final consent was taken so that he can procure all the necessary materials and requirements in time.

5. Plan of action was drawn with the farmer so that he can follow it up properly.

6. Plan out line of the layout of the demonstration was also made and followed.

7. The trainees and staff of the Institute with the help of farmer laid out the demonstration.

A few plan outlines are given on the following pages to serve as guide to other workers in the field.

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COMPOSITE DEMONSTRATION OF SUGARCANE (Jhanjhari)

Name of the farmer: Sh. Prithi Singh

Why the subject is important:

1. To show the effect of aretan for increasing germination percentage
2. To explain the importance of distance between row to row.
3. To show the placement of sets for uniform and effective growing.
4. To teach placement of super phosphate by basal application so that it can easily be available by plants near rootzone.

Place, date and time: Village Jhanjhari farm of Shri Prithi on 26-2-65 at 8.00 AM

List of equipment and materials needed:

1. Aretan
2. Water tub
3. Desi plough fitted with one puara
4. Stirrer
5. Water
6. Bucket
7. Sugarcane sets
8. Super phosphate
9. Two pair of bullocks
10. Rope
11. Patela
12. Balance and weight.

Demonstration breakdown

Important steps	Key points
1. Prepare the land for sowing properly.	1. Field should be well prepared so that no clods will remain there.
2. Mark the lines at 2' distance with the help of rope.	2. Sufficient moisture should be present in the field.
3. Workout the actual amount of super phosphate on each line.	3. 320 grams of super should be applied in each row @ 32 kg. sup. for $\frac{1}{4}$ ac. plot having the length breadth 109' x100' respectively.

4. Add 4 ozs of aretan in a little quantity of water to make homogenous solution (It is sufficient to dip sets for 1/4 acre).

4. Cut hands or injured hands should not be used.

5. After thorough mixing pour the solution in ten gallons of water and mix it well.

5. After 5 minutes sets should be removed from sclution and other sets should be dipped in.

6. Dip the sets in this prepared solution for five minutes.

6. Furrow should be straight.

7. Make the furrow on the marked lines with the help of desi plough fitted with pora.

7. Sets should be placed keeping eyes side ways.

8. Apply superphosphate in required quantity in each furrow behind the plough.

8. After sowing hands should be washed with soap.

9. Placed the treated sets in the furrow after application of superphosphate.

9. Compacting of the soil is essential for good germination.

10. Move another plough after putting the sets to cover the furrow.

11. Cover the furrows with the help of pata (sohaga).

<u>Reactions of the cultivators on the demonstration of sufarcane.</u>

The demonstration was perfomed on the field of Shri Prithi at 8.00 AM on 24-2-65. The following practices were demonstrated:

1. Selection of sets.
2. Treatment of sets with aretan.
3. Placement of sets.
4. Row to row distance.
5. Placement of superphosphate.
6.

The following persons were present during the demonstration:

1. Sh. Ram Krishan
2. " Tola Ram
3. " Krishan
4. " Jela Singh

5. Sh. Sita Ram
6. " Atma Ram
7. " Banarshi
8. " Multan
9. " Desraj

The general reactions of the farmers was that they will see the germination and stand of crop and then only they will be convinced. They were very much impressed by the placement of set in the manner as shown to them. The following questions were placed by the villagers.

Shri Prithvi - raised the question that why should we keep row to row distance 2'. The reply was that for effective supply of food material for good growth and easy intercultural operations which inceases the yield.

Shri Desraj asked - from where we can get Aretan? The reply was that the chemical is available at the block and I.C.I. shop at Karnal, in old mandi.

Shri Tola Ram asked - why super phosphate is applied by means of drill? The reply was that it must be put near the root zone so that it can be easily available to the plant.

The villagers were convinced and assured that they will adopt these practices.

<u>Suggestions:</u>

1. During sowing season a campaign should be organised for the use of Aretan and other practices.

2. Results of demonstration after germination should be shown to all those cultivators who were present at the time of demonstration and regular follow-up of demonstration should be maintained.

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COMPOSITE DEMONSTRATION OF SUGARCANE CULTIVATION
(Shamgarh)

Name of farmer: Shri Amin Chand

Topic: Planting of sugarcane by flat method (improved)

Object:

1. To teach the cultivation about improved method.
2. To prevent the attack of top borers.
3. To prevent lodging.
4. To obtain more germination &
5. To get higher yield.

Equipment & materials used:

1. Two desi plough complete.
2. One drill.
3. Setts 12000 nos. having 3 eye buds.
4. B.H.C. 10% - 25 lbs (12½ kg.)
5. Super phosphate - 100 kg.
6. C.A.N. - 50 kg.
7. Water.
8. Labour - 8 nos.

Place, date and time:

Farm of Shri Amin Chand s/o Sh. Lakhhi Ram, is about one mile off the village on west side. The area of the plot is 185 feetx215 ft. i.e. (0.913 acres). The operation started on 26-2-65 at 8.00 A.M. and was over at 4.00 P.M.

Domonstration breakdown:

Important steps	Key points
1. The field was measured with the help of measuring tape and the area calculated in acre	

2. Quantity of fertiliser @
(i) super phosphate required - @ 40 lbs $P_2 C_5$ per acre was calculated and came to 100 kg (ii) C.A.N. required @ 25 lb. N_2 per acre came to 50 kg. This is to be used as basal dose by way of placement by pora system.

Fertiliser should be placed at about four inches depth.

3. The border of 215' was marked for furrows at the distance of 2 feet from furrow to furrow on both side to facilitate maintaining proper distance and straight furrows.

4. B.H.C. 1% = 12½ kg was mixed with the s.p. - 100 kg.

5. In one plough, drill was attached and the other was left as such, but wooden board was tied to it to turn the soil.

6. a) First straight furrow was opened with the first plough and the S.P. too was drilled.

b) C.A.N too was broadcasted in the furrow.

1) It was so drilled that it was placed about 2-3" deep inside the furrow bottom.

2) The quantity per furrow required was also calculated.

3) The furrow was kept about 12" wide and 6" deep .

7. Setts were dipped in fresh water and were put in this first furrow in 1¼ system overlapping and was pressed a bit with foot and eye buds kept facing sideways.

1) Each set covered 1/4 length of the other.

2) The water dipped setts came in contact with soil immediately which facilitates early germination (Aretan dipping will give quick germination).

8. The second plough was used behind the first plough in such a way that it turned the soil in the first furrow and covered the sets about 2-3" deep .

a)The second plough moved in such a way that it did not disturb the spacing of furrow and was kept about 1 ft. apart from the main furrow.

9. Dhaincha seed 2 kg. was also broadcasted along the North border where some alkalinity was observed.

10. Finally the whole field was planked.

Conclusion:

The cultivator was asked to apply C.A.N. as follows:

A. a) One hundred kg. at the time of first irrigation after about one month.

b) One hundred kg. during the 2nd week of May at the time of irrigation.

c) One hundred kg. during onset of first monsoon at the time of earthing.

B. To check the attack of borer, the cultivator was advised to perform the following operations:

a) During March 1965 spray the whole field with Endrin (20%) liquid with concentration 0.03% i.e. one oz in four gallons of water dissolved. Spraing with foot sprayer or hand compression spray. Precaution to be taken were also told them. For furthor instructions he was asked to contact the Extension Education Institute, Nilokheri.

b) During the 2nd week of April again asked to spray with the Endrin.

C. He was also asked to undertake earthing of the cane in July-August.

D. He was also told about the additional expenditure and income by performing these operations and use of fortilisers and chemicals etc. He was given demonstration of foot sprayer too. He was fully convinced.

E. The other cultivator too exprossed the desire to sow sugarcane and follow the same practice. They were directed to obtain Anetan from the EEI, Nilokheri.

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REPORT ON FILM APPRECIATION

Film appreciation has been a regular feature in every course. The participants used to review films that were shown every week on the campus. These films were connected with various activities of the Community Development Programmes.

The objective of these reviews was to give training to the participants in Mass Methods, and to help them to understand the implications of the use of films as a Media of Communication. This practice of film appreciation was followed in village practicals too.

The participants were given a proforma to assess the reaction of the villagers to films in addition to their own personal comments on the films shown in these villages. The participants had done some pre-planning in the selection of films taking into consideration the following factors:-

1. Nature of the audience.
2. Type of Agricultural practices needed to be emphasized at this time.

A few entertainment films were also included in the package of these films. After the film show an evaluation was made by the participants. They interviewed casually the farmers and recorded their impressions.

Comments:

The participants felt that the whole experience of finding out the reactions of the villagers to films was educative for them. They realised that the audience sees what they want to see in the films. The audience is more influenced by films that have a theme having a direct bearing on their life.

The film appreciation was taken in all the three villages. The general feeling of the participants was somewhat mixed on the subject. It was observed that villagers in these areas like to see films about India - Development work going on in the country - Social and cultural life in other parts of the country. At the same time they showed a keen desire to see films which may help them to earn more by the use of improved practices. During my stay at village Shamgarh, I found the villagers asking for more information about the availability of the pesticides equipment required for using these pesticides and the cost involved etc. This was the impact of showing the film on " safe use of pesticide."

The trainees had the experience of co-relating the film shows with the follow-up. For the first time they realized that film shows are not meant for influencing the villagers to adopt new practices rather it was to make the farmers aware of the improved practices that are recommended by the specialist in the field. This has to be followed by demonstrations, personal contact, group contact and other extension methods to bring about adoption of the improved practices.

The trainees during the evaluation of the reactions of the villagers to the films noticed a receptive attitude of the farmers toward the film shows in general.

The pre-view of the films helped the participants to tell the villagers about the areas of interest for them during the film show.

Out of the film appreciation reports, the one submitted by village Shamgarh gives an idea how the whole programme was conducted, publicity made, exercise in oral communication and reactions of the farmers obtained. The film appreciation report on village Shamgarh is followed in the next few pages.

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FILM APPRECIATION REPORT OF VILLAGE SHAMGARH

Village is situated at a distance of about 5¾ miles from Extension Education Institute, Nilokheri. The population of the village is over two thousand. The number of farm families is about 300. It was found that most of the children of the village attend school. There are two religious places where people often meet - one is Gurdawara and other is temple. During the last year, we were told that two film shows were arranged by the Block and District Public Relation Officer of Karnal. The people, in general, were found to be responsive to progressive ideas. Therefore, it was decided by the group to arrange a film show with the following objectives in mind:

1. To provide a forum for the people to discuss ideas on Agricultural Production.

2. To help them to understand some of the improved Agricultural practices that are recommended for Agricultural production.

3. To give them an opportunity to compare conditions of their village with the condition of the other part of the country.

4. To provide them recreation and entertainment.

5. To give them glimpses of new and old India.

(a) Selection of film: -

Taking into the consideration, the objectives mentioned above, the following films were choosen.

1. Silent film on Shamgarh and Jhanjhari.
2. So to sleep (Hindi version).
3. Safe use of pesticides (Hindi)
4. India welcomes queen (Hindi).

The film show was fixed for 26th February, 1965 at 7.30 P.M. It was shown at the child welfare centre where we have a stage for open air theatre.

(b) Publicity:- All members of the village personally conveyed this information to all the persons with whom they came in contact during day to day work. The person who was incharge of this project during village practicals went to the Primary school to inform about the film show to the children. He also made an announcement at the Mahila Mandal meeting held in Gurdawara on 26.2.65. Through the village Chowkidar Rulliya, an announcement was made in the village.

(c) Participation: - The programme started at 7.30 sharp. About one thousand person attended the show. The number of children was about 200. The number of women was also approximately five hundred. Mukhya Sevika (trainees) from Bakshi-ka-talab alongwith their incharge Miss Saxena also attended the show.

(d) Oral Communication : - Two days before the film show Mr. R.C. Tyagi during our group discussion at the end of the day brought out an idea of communicating to the people of the village Shamgarh about "grow more food." This idea was thoroughly discussed in the meeting and ultimately the group came to the conclusion that the farmers have two major problems.

1. Smut of wheat. 2. Soil alkalinity.

Group selected two slogans for these problems.

1. Treat wheat seed with Agrosan G.N.@ 2 chhataks per mound to control Smut which costs only 60 paise.

2. Take Dhaincha - Paddy - Berseem where irrigation facilities are available.

In between the gaps of the films, Mr.Tyagi highlighted these points to the audience.

(c) Reaction of the farmers:- The general feeling of the people was of appreciation for the programme. The people who were interviewed the next day expressed satisfaction about the films shown in the programme. " So to sleep" was highly appreciated. " India welcomes queen" was liked by the farmer because it took them to the various historical places in India which they could have not seen otherwise. The silent film on Shamgarh and Jhanjhari had an harmonising effect.

As regards the " Safe use of pesticides", most of the people liked it. They were of the opinion that it imparted new information, it gave them some new skill. They wanted to see such films more. But in some cases, they expressed that they could not follow commentary and dialogue. In one or two cases, the farmers said that this is not possible in day to day operation.

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CASE STUDY

Youth Club Shamgarh

Back_round:- The village Shamgarh is situated at a distance of about six miles from Nilokheri on Delhi-Ambala Road towards Karnal side. An approach road of about 3 furlongs length joins the village with G.T. Road.

As per census of 1961 the total human population is 2621. The total number of families in the village is 458 out of which 300 are land owning families, 70 are tannet families, 32 Agricultural families, 9 Shopkeeper families, one is Black-smith family, 5 are Carpenters families 25 are Shoe-makers families, 2 are Weavers families and 14 families are of Basket makers etc. The entire population is distributed amongst Sikhs, Rors, Seni, Brahmans, Harijans and Coblers. Seni and Rors are in majority.

The main occupation of the people is agriculture and the rest are agricultural labours and artisans. About 65% people are literate. There is one Primary and Secondary School in the village. The total strength of the students in the above classes is 30,24,14 respectively.

The village comes under the jurisdiction of Block Nilokheri and as such the programme pertaining to Animal Husbandry Agriculture. Health and Sanitation are carried out by the Block staff. All the lanes of the village have been made pucca with bricks. The every cultivator in the village has got his own irrigation source. There are 30 cultivators who have got their own tubewells and the remaining people have messonary wells fitted with persian wheels. In this way the entire area is irrigated.

The investigation visited the village Shamgarh on 21st February 1965 and then on February 24th. The investigation is trainee of Extension Education Institute Nilokheri and as a part of training assignment, he visited the village and later on stayed there from 24th February to the 28th February,1965. The main objects of the visit were as under:-

1. To study the working of the youth club.

2. To suggest ways and means to improve the working of youth club.

He had contacted the school teachers, members of the Panchayat and many other young and old people of the village and came to know that previously a club named " young farmers club Shamgarh" existed in the village which later on disintegrated.

The investigator contacted with 50 mary young people of the village. The great interest and enthusiasm shown by them inspired and motivated the investigator to find out the hurdles and difficulties which led to the disintegration of the club.

Source of Study:-

The following are the source of this study:-

(i) Members of Panchayat.
ii) Young people of the village.
iii)School teacher.
iv) Village Level Worker.

There were interviewed by the investigation.

Findigs :-

i) As a matter of fact no organised Youth Club existed in the village.

ii) There existed a young farmers club and the main activities of this club were confined to game and sports only.

iii) No land was allotted to the club by the Gaon Panchayat in the near viscinity of the village and a piece of land was allotted to the club which was away from the village and as such no Agri: activitiy could be taken-up.

iv) The membership of the club was 22 and Sardar Gurindar Singh was the President of the club.

v) Due to the intensive Agriculture programmes the Youth hardly gets time to participate in the club activities and they are always busy with agriculture operations on their fields.

vi) Some members of the club have grown up and have gone to other places either for study or service.

vii) Lack of financial and technical assistance from the Panchayat and Block have also told upon the working of the club. The Youth club activities require proper and constant guidance by the trained personnel and due to lack of this club ceased to function.

viii) There are 30 young boys studying in ninth to tenth class and 30 in higher classes. The young boys of the Village have started on Akhara in the village and they participate in it regularly. In addition to this in Secondary School the boys take part in games and sports and kitchen gardens have also been maintained by them. This clearly shows that a great potential exist in the village. The investigator is also of the opinion that systematic and organiseed efforts have not been made to organise a youth-club in the village.

Suggestions:- The following are the suggestions for the reorganisation and efficient working of the club which may be considered and accepted.

Organisation and training:

1. The club may be reorganised and a training should be imparted to all the members of the club giving a clear conception of the objects and the functions of the club. The youth may be trained in organising club, conducting of meetings, keeping records and other fields of interest. This sort of training is indispnsible for the efficient and smooth working of the club which may be organised either at Extension Education Institute or at the Block itself.

The members of the club should be given a practical training for a short duration in the field of Agriculture, Horticulture, Kitchen gardening and Poultry Keeping etc. This will technically equip the members of the club to start with economic projects like kitchen gardening and poultry keeping etc.

2. Project: - No institution can function without the financial assistance. In order to give an economic help to the club members , some suitable land is the near viscinity of the village should be allotted the club. This will help the members to start Kitchen gardening, Papaya plantation and Poultry Keeping etc. The cost involved in these projects will be minimum and with a little care and effort a member could get some economic help. The project may be individual on joint. This will provide the opportunity to the members to learn new things by doing themselves. This will cultivate a habit of group working among the members.

3. Aid from Panchayats: - Panchayats can render help to the clubs in the form of Small Implements for Kitchen gardens , improved seeds , Plants and seedlings etc. This help can also be given in the form cash for the purchase of chiks , fruit plants seeds and fertilizers etc. This sort of incentive from the Panchayats will develop an enthusiasm in the club members.

This will develop the youth of the village in to well informed citizens of democratic country like ours.

4. Guidance : - Close and constant technical guidance is also lately essential for the efficient working of the club. This can be had in the following way.

(i) The local V.L.W. or any other Government functionary at the village level should be entrusted with this task.

(ii)Panchayats and its office bearers may also be utilized for this purpose.

(iii) Any other technical personnel of the Block or extension institution may under take this job.

(5) Competitions:- In order to arouse a feeling of healthy competitions among the members and the clubs of the Block village level and Block level competitions should be organised.

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KITCHEN GARDENING

The villages selected for village practicals and staff projects are close to Karnal and there is lot of scope to introduce vegetable growing. It will serve many fold purposes viz.

i). The family will get vegetables for home consumption through out the year.

ii). The farmer will get knowledge about the cultivation of different vegetables.

iii). The farmer will include vegetables in his farm plan as a cash crop and will benefit more.

Keeping in view the above mentioned purpose, the trainees of the present course were given an assignment of selecting a few families and lay out a kitchen garden in the fields preferably near the wells. Since it was a new programme of introducing vegetable growing in the villages, the trainees will benefit by gathering new experiences of convincing farmers of inclusion of vegetables in their diet, to raise it at his own farm and economy in vegetable growing. The trainees efforts are given below village wise.

I - Jhanjhari.

Laid out two kitchen garden during their stay and convinced about a dozen who will take it up very shortly either after potato or wheat. The following two kitchen gardens were laid out.

a). At Shri Dhani Ram's field.

He has grown bhindi, tinda, bottle gourd, tori, musk melon and onion. The total piece of plot is 40' x20'. Irrigation facility is there at the farm. It was sown on 26th February, 65.

b). At Shri Jai Singh's farm.

Vegetables sown are bhindi, bottle gourd, red gourd and onion. It was sown on the 27th Feb.65. He propose to sow some more vegetables like tinda, tori, kerala etc

The plot he proposes to put under different vegetables is 1/8 acre. The other farmers who propose to lay out kitchen garden a bit later are Sarvashri Shiv Ram, Ram Kishan, Sunder, Prithi, Jagat Singh, Amar Singh, Jai Singh II, Raja Ram, Shersingh, Banarsi Das, Desa Ram and Shankar.

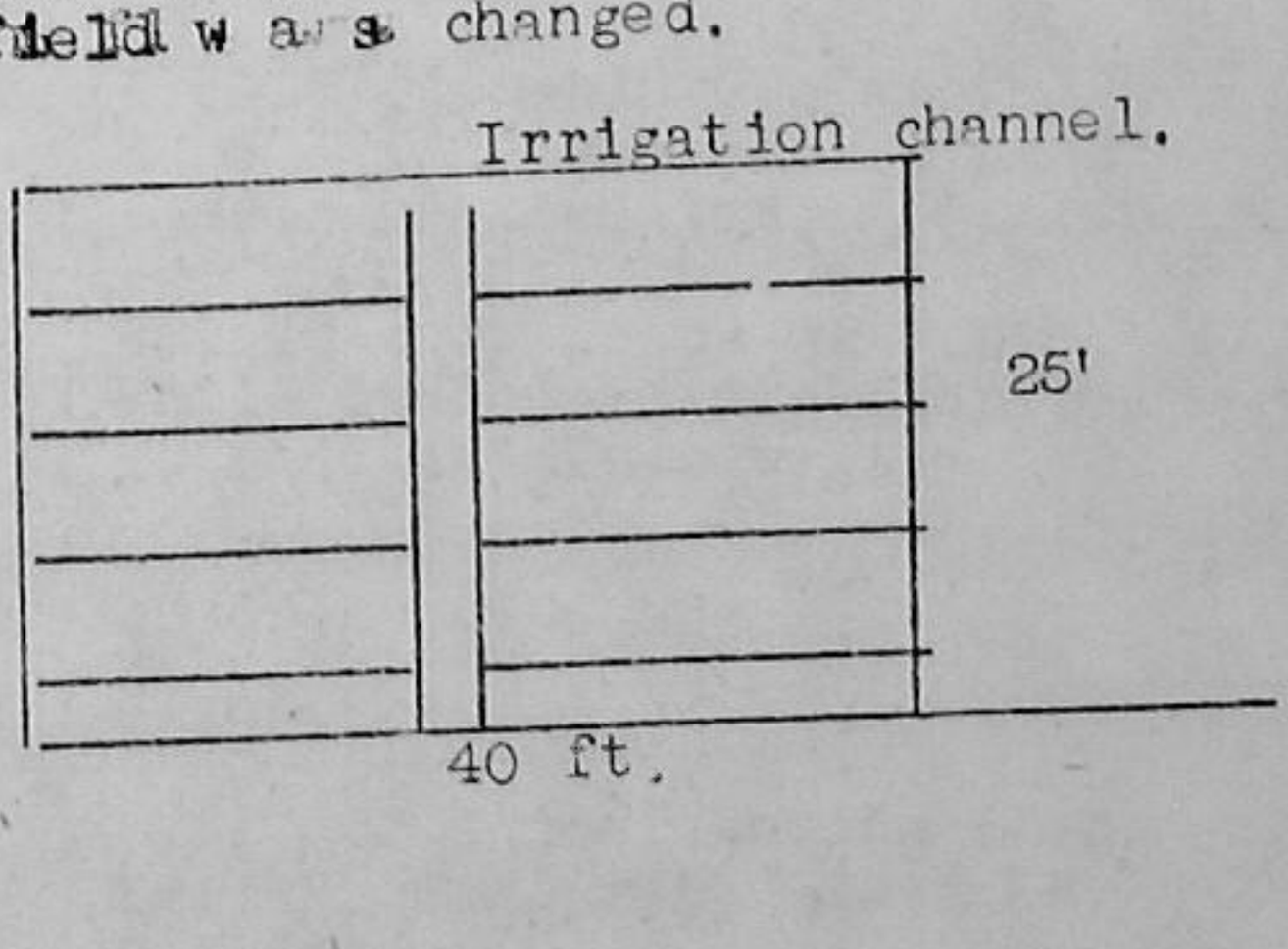
II - Shamgarh.

The participants have distributed bhindi seed to three farmers to sow them in their fields, near their wells. Seeds were distributed to the school children in the middle school. The participants could not find any home for this purpose.

III - Dadupur.

The farmers of Dadupur village were contacted for growing more vegetables under kitchen garden project. Many cultivators responded to this drive. The prominent farmers such as the sarpanch of the village, Shri Budh Ram, Shri Nagar Singh and many others became interested to undertake this scheme.

Promise to supply bhindi seeds on free of cost to as many cultivators as possible. Cultivators were asked to prepare the land for sowing. The land of Sarpanch was specially taken under this project as a "Demonstration plot" of kitchen garden. The Sarpanch informed about the completion of the preparation of his land. The land was inspected and found that the land is not ready. The lay out of the field was changed.



Irrigation channel was provided in the plot. As the land was not well pulvdrised, sowing could not be started. Only demonstration was given. The proper spacing for seed sowing is shown to the farmer. The farmer promised to sow the seeds on the next day.

Many other farmers came forward for sowing of bhindi seeds such as Shri Budh Ram, Sh.Nagar Singh etc.

Visited the plot of Sarpanch. The field was ready for sowing. The sowing was completed. The plot of Shri Baru Ram has been sown. Shri Budh Ram, Shri Nagar Singh also completed sowing.

As no other plot was ready for sowing we distributed the bhindi seeds to the intending growers and they promised to sow the seeds as per our direction in their plots within a day or two.

Instructions were given regarding weeding and other intercultural operations whenever required. They were further advised to continue this plot for kitchen garden and sow other vegetable seeds in these plots and the plots nearby. The requirement of vegetables for the family should be met up from this kitchen garden.

A detailed note on package of recommended practices for summer vegetables is appended.

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PACKAGE OF RECOMMENDED PRACTICES FOR SUMMER VEGETABLES.

R.D.Kaushik

I - Bhindi

Nutrition value:- High in protein content.

Have more Vitamins "A" & 'B' than most other vegetables. Also contains Vitamin 'C' and minerals.

Soil : Sandy to clayey but well drained and fertile.

Variety : 1. Pusa Sawani.

2. Pusa Makhmali (for early sowing).

Characteristics of pusa Sawani.

i). It is not affected by virus diseases.

ii). Very high yielding (250 mds per acre).

iii). Fruits are 6-8" long.

iv). Fruits have attractive green colour.

v). Can be sown throughout the season beginning from Feb. to July.

Field preparation. 4 to 5 ploughing so as to make a fine seed bed. Land should be levelled.

Manuring. Add 40 cart loads of F.Y.M. While land is being prepared so that it mixes well.

Seed rate and sowing. Seed should be soaked over night.

(a). For summer sowing (Feb. March). Seed rate 10-12 Kg. per acre.

Spacing. Row to row - 1 ft.
Plant to plant - 6 inches.

(b). For rainy season (June -July)
Seed rate - 4-5 Kg. per acre.

Row to row - 2 feet.
Plant to plant - 1 ft.

Fertilizers: In addition to 40 cart load of FYM).

(a) Before sowing.

Superphosphate - 1½ Md (20 lbs P_2O_5)

Ammonium Sulphate - 1 Md. (15-20 lbs.N)

(b) After sowing (at flowering when plants are 4 weeks old).

Ammonium sulphate 1½ Mds (25-30 lbs. N)

Interculture: Destroy weeds and aerate the soil by regular hoeing.

Harvest: Ready after 40 days of sowing, for first picking.

II - Brinjal.

Importance : Brinjal are highly nutritious. They are high in vitamins A & B. It is important vegetable crop in Delhi area and it gives fruits all the year round by adjusting the time of sowing and planting.

Soil : Sandy loam soils are considered most suitable for this plant. Good props have also been obtained in loam soils that are deep, rich and well drained. A liberal amount of decayed organic manure is essential for getting high return.

Variety : Pusa purple long.
Pusa purple round.

Characteristics of Pusa purple long:

1. It is very high yielding.
2. Can be grown all the year round.
3. It is an early bearing variety.
4. Fruits are shining and deep purple.
5. Fruits bear in clusters.

Nursery raising:

For raising nursery plants, broadcast seed on a thoroughly prepared seed-bed and mix lightly with the soil. Spread a thin layer of leaf mould over the beds. Water nursery beds with rose cans. Sow six ozs of seed on an area of one yard wide and 60 yards long i.e. 1/80 acre. It will be sufficient for planting one acre of field. Seedlings 4-5 inches high will be ready for transplanting.

Pusa purple long can be sown three times in a year.

1. Sow seeds in first week of November and transplant in seedling in January to get fruits during March-May.
2. Sow the seeds in February and transplant by the end of March. This would be ready for picking from June-August.
3. Sow the seeds in the middle of June and transplant by the end of July to get fruits during September-January.

Land preparation:

Prepare the land well before transplanting. About 40 cart loads of well rotton farm yard manure per acre may be mixed with soil.

Transplanting:

When the seedlings have grown to the height of 4 to 5 inches they are ready for transplanting.

Distance from row to row - 2 ft.

Distance from plant to plant - 1½ ft.

Manures and fertilisers:

1. Basal dose at the time of transplanting.

a) Farm yard manure - 40 cart loads (20 tons).

b) Superphosphate - 4 mds.

c) Ammonium sulphate - 1 md.

d) Murate of potash - 1 md.

2. Top dressing - at flowering time - six weeks after transplanting.

Ammonium sulphate - 2 mds.

Apply the fertiliser around the plant, work it in by hand hoe and irrigate the crop.

Interculture:

For keeping weeds down and provide proper aeration regular hoeing is necessary. Sharma hoe and wheel hoe will be economical.

Harvesting:

A good crop will give an yield of about 300 mds. per acre.

Pick the fruits before they are fully matured, but allow them to attain a good size and colour. They should not lose the gloss and smoothness on the surface.

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III. TOMATO

Nutritional value:

Rich in Vitamins A, B and C. Used as raw as well as cooked in different forms viz: salads, pickles, ketchups and juice.

Soil:

Deep and well drained soil but retentive of moisture.

Variety:

Pusa Ruby.

Charactoristic s of Pusa Ruby:

1. It is oarly maturing.
2. High yielding.
3. Modium sizod fruits.
4. Uniform deep rod colour.
5. Tolorant to diseases.
6. Withstand oxcoss moisture.
7. Can bo raisod as autumn - winter and spring - summor crop.

Nursery raising:

Nursery should bo grown on raisod beds. About 5 ozs of seed is sufficient to grow seedlings to transplant one acro of fiold. An aroa of 25x20 ft. will be needed to sow nursery of 5 ozs. of seed. The soil of the nursery bed should bo ric h and have organic matter in large amount. Give light irrigation after sowing seeds in the nursery beds. Seedlings 4-5 weeks old or 6-9 inches high are ready for transplanting.

Field preparation:

Give about four ploughings to make a fine seed-bed. Fifteen to twenty cart loads of farm yard manures may be well mixed with the soil.

Transplanting:

For summer crop transplanting should bo done in February and March. The seedlings should be planted in rows 2½ ft. apart and with a distance of 1½ ft. between plants in rows. Irrigate after transplanting.

Fertilisers:

In addition to farm yard manure (a) before transplanting, superphosphate mds. per acre, (b) After 15 days of transplanting ammonium sulphate - 1¼ mds per acre and (c) at flowering time ammonium sulphate - 1¼ mds per acre.

Intorculture and after care:

Ensure clean cultivation of providing regular weeding and hooing. Tomato has a wide spreading root system and require shallow cultivation to avoid injury to the roots. After 2-3 dooings the plants are earthed up.

Staking is doon whon plants aro 1 - 1½ ft. high.

Harvosting:

It takos about 3-4 months to maturo. The crop sown in Fob-March is ready for harvost in Juno-July.

An avorago yiold of 200-250 mds. can bo had on good soils.

Othor important varioties:

Pusa Ruby (Early), Pusa Rod Plum (Lato), Marglobo, Rustgors, Mocruti, Bost of all, Boney bost, Largo rod, Goldon Quoon.

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BOTTLE GOURD

Importance:

Bottlo gourd is a popular summor vogotablo availablo whon most of tho wintor vogotablos aro out of tho markot. It is a warm soason crop and thrivos woll on a wiso rango of soil.

Varietios:

a) Pusa summor prolific long.

b) Pusa summor prolific round.

Characteristics of Pusa summor prolific long:

a) Bears 10-15 fruits por plant.

b) Fruits aro long measuring 16-20".

c) Can bo grown during summor and rainy soason.

d) Fruits aro vory tasty.

Characteristics of Pusa summor prolific round:

a) Prolific in fruiting and boars 20-25.

b) Fruits aro round.

c) Fruits aro 5-7" in girth.

d) Fruits aro green, tondor and dolicious.

e) Can bo grown during summor and rainy soason.

Preparation of land:

Five to six ploughings and levelling is required. Make 8$\frac{7}{8}$10 ft. wide beds for summer crop leaving about 2 ft. wide channels for irrigation.

Manures and fertilisers:

Pusa summer prolific variety has an extensive root system. To get good crop it is essential to manure the entire field.

a) Apply 20 cart loads (10 tons) of farm yard manure to an acre.

b) Apply a mixture of 10 k.g. of super phosphate and 40 kg. of sulphate of potash per acre during final ploughing.

c) Ammonium sulphate - 2 mds. per acre. It should be applied in two doses before and after flowering sets in.

Sowing:

Sow the seed durimg January and February to get fruits from March onwards.

Sow the seed during June-July to get fruits from October to December.

Dig pits of 1 ft. diameter and the same depth on one side of the channel, keeping a distance of 3-4 ft. between pits.

In each pit mix the following manures:

a) Compost - 10 kg.

b) Superphosphate - 28 gram or 1/2 chh.

c) Ammomium sulphate - 28 grams or 1/2 ch. Press this soil mixture in the pit and put 4 seeds in each pit at a depth of 2".

About two kg. of seed is enough to sow an acre.

Pre-sowing treatment of seed:

For the crop sown in January and February germination is to be initiated in the seed before sowing. Soak seeds in luke-warm water for about 24 hours and wrap them up in a thick cloth wetted with warm water and place in the kitchen near the fire place. Sprinkle warm water both morning

and evening for three days. The seeds generally sprout in six days. These sprouted seeds are fit for planting.

Place the germinated seed in the pits with sprouted ends facing downwards. Protect the seedlings from cold by providing a thatch or with leaf mould covering close the ground.

Harvesting:

Fruits are ready for harvest after 75 days of sowing.

Summer crop yields - 75-100 mds. per acre.

Rainy season crop yields - 200 - 225 mds. per acre.

V. BITTER GOURD (KARELA)

Importance:

Iit has vitamins A, B & C and iron.

Sowing time:

First crop - February-March
Second " - June-July

Seed rate:

Four lbs - 2 kg. per acre. If kept in a proper place, the seeds are good for sowing for five years.

Type:

Two types are available:

a) Small fruited - for summer.
b) Long fruited - for rainy season.

Sowing method:

Raised beds of about 5 feet width are made with 1½ ft. wide irrigation channel. Pits are made on both sides of the beds at 3 ft. distance. Three to four seeds are sown about 3/4" deep in each pit. Seed should be soaked for 24 hours in water and wrapped in a cloth till it starts germination.

Manures and fertilisers:

Karela responds to heavy doses of manures. Twenty tons of farm yard manure should be applied. Ammonium sulphate @ 1½ md. per acre after sowing.

Yield:

Ready for harvest after two months. Average yield of 100 mds per acre on good land.

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VI. SPONGE GOURD (Luffa or tori)

It is of two types:

1. Ghia Tori - for early and summer season.

2. Kali tori - for rainy season.

Kali tori needs more care than ghia tori. Both the types can be sown in both the seasons. It has vit. A, B, C and Iron in large quantity.

Varieties:

a) Pusa chikmi
b) Pusa Nasdar
c) Sat Putia Bihar

Sowing time:

First crop - January-March

Second crop - June-July

Seed rate:

Four lbs or two kg. per acre.

Manure and fertiliser:

Tori remains for a longer period and draws a large amount of nutrients from the soil. Ten tons of farm yard manure per acre should be added at field preparation.

At fruiting time 1 md. of ammonium sulphate is added for more and big fruits.

Sowing method:

It should be sown on raised beds of 8 ft. width. Two ft. water channels may be provided in between beds. Pits may be made 4 ft. apart on both sides of the beds. Three to four seeds are planted in one pit. Staking is necessary for rainy season crop where as summer crop can spread on ground.

Irrigation and weeding:

First watering just after sowing and subsequently after an interval of seven days to summer crop. Regular hoeing and weeding is necessary.

Yield:

Crop will be ready after two months of sowing - 125 mds. per acre.

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VII. RED GOU RD (PUMPKIN OR HALVA KADDU)
or Sita Phal

Importance:

It is used as vegetable. It has vit. A in abundance and vit. B and C in small quantity.

Time of sowing:

There are two crops viz: early and late.

Early crop: - January-March

Late crop - June-July.

Seed rate:

Six lbs. or 3 kg.

Land preparation:

Sita phal gives high yield on light soils. Three to four ploughings will be sufficient.

Manure and fertiliser:

Farm yard manure - 10-15 tons per acre. Ammonium sulphate - 1 md. per acre. (When plants are 20-25 days old).

Varieties:

The seed of following varieties is available in the market:

a) Large Red.
b) Large cheese.
c) Large round.
d) Yellow flesh.
e) Red flesh.

Method of sowing:

Raised beds of 8-10 ft. width are made by providing 2 ft. wide water channels. Four to five seeds are sown in pits made on both the sides of the bed at a distance of 4-5 ft. After germination only two or three healthy plants should be kept.

Irrigation and weeding:

This crop requires a large amount of water. Heavy irrigation should be given every week during summer.

Regular weeding is also required.

Harvesting:

The fruits should be plucked when fully ripen. Immature fruits do not last long.

Yield:

Average yield 300 mds. per acre.

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VIII. WHITE GOURD (Ash gourd or Wax gourd or Petha)

Importance:

It is cultivated for making sweet meats. It contains vit. B and C in large quantity and vit. A in small quantity.

Time of sowing:

First crop - Feb-March
Second " - June-July

Seed rate:

Four to five lbs. per acre.

Land preparation:

It requires sandy soils. Therefore such soils don't need much ploughing.

Manures and fertilisers:

a) Farm yard manure - 5-10 tons per acre.

b) Ammonium sulphate - 1-1½ mds. per acre.

(when crop is one month old)

Method of sowing:

First crop: Raised beds of 8-10 ft. width are made by providing 2 ft. wide water channels. Pits on both the sides of the bed are made at a distance of 4 ft. Three to four seeds are sown in each pit about 1/2" deep. Irrigation is given just after sowing.

Second crop: It does not need much irrigation. Only early crop needs irrigation after an interval of 8-10 days.

Harvest and yield:

Petha should be plucked when fully mature. When fully ripe, its colour becomes bluish white and it breaks from the vine. Average yield per acre is 200 mds.

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IX. MUSK MELON (Kharbuja)

Importance:

Musk melon contains vit. A, B & C.

Sowing time:

January-March.

Best time is middle of February.

Seed rate:

Three - four lbs. per acre. The viability of seed remains for 5 years. Good seed's germination capacity is 85%.

Land and its preparation:

It can be grown on a variety of soils but loamy soils are best suited. It can be grown on sandy loam soils but it needs lot of manuring. It can not be grown on heavy loam soils.

Fine seed bed is required with enough amount of moisture in it for good germination.

Manures and fertilisers:

Kharbuza gives high yields on soil rich in nutrition.

a) Farm yard manure - 20 tons per acre.

b) Ammonium sulphate - 2 mds. per acre.

Varieties:

a) Amritsari or Hari dhari fruit is big in size.

b) Lucknow sweet or Lucknow safeda - fruit is small in size.

c) Other varieties are Faizabadi, and Jaunpuri sweet.

Method of sowing:

Four to six seeds are sown on the sides of the pit. Seeds are sown about 1/2 inch deep. Irrigation is given just after sowing. For good germination of seed, give another irrigation after a week.

In late sowing when season warms up, the seeds germinate after four or five days.

Irrigation and weeding:

Hoeing and weeding should be done after each irrigation till vines take a good stand.

Earthing of the plant should be done during each hoeing.

Weekly irrigation is necessary till fruit formation. Thereafter fortnightly irrigation is given.

Harvesting:

Fruits should be allowed to ripe on vines and lot it separate itself from the vine.

Yield:

Average yield per acre is 125 mds.

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LONG MELON (Tar or kakri)

Importance:

Used as raw and cooked. It is also used in salad. It has cooling effect.

Time of sowing:

February - March. For taking early crop, it is sown in November.

Seed rate:

Two-three lbs.

Soil and its preparation:

Kakri grows on all kinds of soil but rich loamy soils are best for high yields. Three to four ploughings are given before sowing.

Manures and fertilisers:

Kakri requires lot of manure:

a) Farm yard manure - 15 tons per acre (at land preparation).

b) Ammonium sulphate - 2 mds. per acre. It may be given at the start of fruiting.

Varieties:

1. Light green - these are very tender and can not be transported to distant places.

2. Green kakri - it has two types:

   a) New Hempshire Mist - it is short fruited.

b) Asahiyamto. It bears medium size fruit. There is another variety Lucknow early.

Method of sowing:

Four to six seeds are sown in pits made earlier. Irrigation is given just after sowing. It taken one week to germinate seed during February and March.

Irrigation and weeding:

It require more water for good development of fruits. In summer it requires irrigation after every four or five days.

Two to three weeding and hoeing are given to check weeds and easy spreading of vines.

Yield:

Average yield 150 mds. per acre.

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WATER MELON (Tarbuz)

Importance:

It can be grown on poor soil where other crops do not give economical yields. Generally it is preferred to sow it on sandy soils where other grain crops don't grow. It has small quantity of vit. A.

Sowing time:

The seed germinates very well when temperature is between 65° - 75° F.

Early:

Middle of January to middle of March. (middle of Feb. is best.)

Late: Middle - June - and of July.

Seed rate:

Good seed germinates to the extent of 80%. If stored carefully it is good for germination for two years. Three to four lbs. of seed is sufficient for an acre.

Soil and its pr paration:

It is grown on sandy soils but loamy soils are best for it. On the banks of the rivers it grows well provided well rotten farm yard manure is added. Pits are dug and manure is added in these pits. Two to three ploughings are sufficient.

Manures and fertilisers:

No manure is generally given to tarbuz but if it is given with irrigation, it gives very high yield.

a) Farm yard manure - 10 tons per acre.
(at land preparation stage)

b) Ammonium sulphate - 1½ - 2 mds per acre.
(at the time of fruiting).

Varieties:

1) W 21
2) W1 . . .
3) Jaunpuri red
4) Farkhabadi
5) Faizabad
6) American variety - stone mount
8) A ahi Yamato.

W.21 is early variety and have more sugar contents. It has very few seeds. Average weight of the fruit is 13 lbs. It is good for Delhi.

Irrigation:

It is necessary in the beginning after every week. Thereafter fortnightly irrigation is given. When fruits start ripening irrigation is stopped totally.

Yield:

300 mds. per acre.

SQUASH MELON (Tinda)

Varieties:

Early yellow prolific.

Early long green.

Sowing time:

First crop - February-April

Second crop - June-July

Seed rate:

Four lbs or 2 kg. per acre.
(the viability of seed
remains for 3 years).

Sowing method:

Raised beds about 5 feet width are made by providing 2 ft wide water channel in between beds.

Seeds are planted 1/2" deep and about 2 ft. apart on both the sides of the raised beds. In one pit 3-4 seeds are sown. Plants will come out between 7-14 days.

Manures and fertilisers:

a) Compost or farm yard manure - 25-30 cart loads (15 tons).

b) Ammonium sulphate - 1½ mds.

In two doses when plants are 15 days and 1½ month old.

Maturity:

Ready for picking after two months of sowing. If fruits appear after one month those should be plucked unmatured.

Yield:

100-150 mds. per acre.

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CUCUMBER (Khira)

Importance:

It is eaten row and added in salad. It has got medicinal value. It has got vit. C in abundance. It also has vit. B.

Sowing time and seed rate:

Cucumber seed does not germinate if temperature is less than 50°F. If seeds preserved

properly, they do not lose their viability for five years. Good seed should have 80-90% germination.

Two to three lbs. of seed is required for an acre. Early crop - mid. Feb-March.
Late crop - Middle - June-July.

Land preparation:

For having early crop, it should be sown in sandy loam soil. If late and heavy yield is to be taken, then it should be sown in heavy loam or clay loam.

Three ploughings should be given to prepare land before sowing.

Manure and fertiliser:

a) Farm yard manure - 15-20 tons.

b) Ammonium sulphate - 1½-2 mds. per acre. (given in two doses in standing crop) - one dose after 20 days of sowing. and another when fruiting starts).

Varieties:

a) Straight
b) China
c) Balam Khira
d) Cherkino
e) Gole khira or vanga

Sowing method:

Raised beds of about 5-6 ft. wide are made with 2 ft water channel. Pits on both the sides of bed are made at a distance of 4 ft. 4-6 seeds are planted in one pit. After 3 weeks only two to three healthy plants are kept in each pit. It is also sown on flat land during rainy season. Staking is necessary during rainy season if there are more rains.

Irrigation and weeding:

During summer, irrigation is given every week but during rainy season it should be given as and when necessary. Water is given in channels and it is not allowed to spread on the whole bed. The vines should be protected from excess of water.

Before the vines spread, two to three hoeings and weedings should be done. Deep hoeing should be avoided because it may injure the root system.

Yield:

Average yield 100 mds. per acre.

RURAL YOUTH CLUB
JHANJHARI

One of the important item of village work is organising a rural youth clubs and establishing them on firm footings so that these can be shown as a specimen to the Extension workers of the block and others who came for training at this Institute. The staff members with the help of the participants who came here for training set a pace to organise a club if it does not exist or evaluate it with a duel fold purpose viz. (1) the evaluators will be in a position to go deep and study all the places and can enrich by seeing shortcomings and their achievements (2) the club which is being evaluated will also come to know their shortcomings and will enrich by the experiences of the evaluators.

Most of the Extension workers have not sofar developed faith on the activity of the youth club. One of the reasons may be that they have not got an opportunity to see a successful running club. To develop faith in the trainees this item on rural youth clubs was taken up during village practicals. The trainees were given some literature which will help them in their work. Some of it is mentioned below:

1. Model consitution.
2. Note on why youth clubs.
3. Note on projects and activities of the club.
4. Note on recommended practices on summer vegetables.

In village Jhanjhari, a club was established during October 1964 by this Institute. The trainees have done a good piece of work in evaluating the activities and projects taken up by the members of the club. The following are the findings of this group:

1. <u>Need for a club:</u> Nearly fifty boys between the age of 10-25 both school going and in occupation devoted most of their time in unfruitful persuit. Youth who have not joined the club are eager to join it but it is learnt that the present club members who number 30 feel crowded and thinking to divide it into two age group clubs.

2. <u>Approach in organisation:</u> The following steps have been taken up in organising club:

a) Survey of the youths.

b) Individual contact with youth and their parents.

c) Conducted meetings of the boys and to tell them objectives of the club.

d) Conducted meeting of the parents.

e) Involved village leaders and panchayat.

f) Involved parents.

g) Involved block staff.

h) Foundation was laid with firm faith and with the full coopera-tion of village.

i) Film show on youth club was shown.

3) <u>Educative process and awareness:</u>

Weekly meetings of the members and executive committee are held to discuss projects and other programmes of the club. Knowledge in rural youth clubs and projects know how is given. Parents are invited in the meetings and two adult leaders are included in executive committee. Block staff, progressive farmers and others connected with youth activity are invited to address the group.

4) <u>Projects taken up by the members:</u>

a) Individual projects are cultivation of vegetables viz. potato, tomato, cauliflower, cabbage, pea, raddish. Generally the boys have grown 2 or 3 vegetables but it was suggested to specialise in one.

The size of the plot varies from 150 sq. ft. to 900 sq.ft. but most of the boys have 20' x10' plot. The condition of vegetables was satis-factory.

b) <u>Common projects:</u> Games, tree plan-tation and geneial cleanliness of the village have been taken up.

Poultry house is ready but it is under consideration how to start a cooperative poultry.

Weekly meetings are held to train members in parliamentry procedure of conducting and addressing meetings.

5. Proposed projects for summer and kharif:

1. Bhindi
2. Hybrid maize
2. Cucurbits
4. Sugarcane.

6. Executive committee: It consists of President, Vice President, Secretary, Treasurer, Games Secretary, Social Secretary, Project Secretary and two adult leaders as project advisors.

7. Finances: The financial condition of the club is satisfactory. The boys contribute 25 Paise per month or Rs.2.00 per year. Without outside aid they have at present enough amount to support the activities of the club.

8. Suggestions:

a) Projects in home yards have not come up upto the mark. Efforts should be made to select plot for agriculture project in the field. Field projects have come up very nicely.

b) The members should specialise in one crop or vegetable and apply improved technique of cultivation so that it serves as a demonstration.

c) The follow-up by the official agencies should be maintained and be more closer to impart more knowledge and skill.

d) Competitions and recognition should be encouraged.

e) Training of members and parents should also be arranged occasionally.

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STUDY TOUR

A group assignment

STUDY OF INTENSIVE AGRICULTURAL DISTRICT PROGRAMME

District Mandi State H.P.

Objective:

The study of the Intensive Agricultural District Programme areas and method of rapidly increasing food production is extremely important to Extension workers. After a detailed presentation of the entire scheme is made on the campus one of the Districts is selected for a field study. The participants are expected to study the programme in action and to get a comprehensive view of the working and results of the scheme.

Method of approach:

For a detailed study specific assignments are given to small groups. Nine sub-groups will take up the various aspects of the programme and contact the persons concerned for detailed information. In addition to the overall picture these specific assignments help the groups to go deep into the functioning of the programme at all levels. Each member of the group should t r y t o use a variety of ways and means to collect first hand information by field observation and interviews. The sub-groups will compile information in the shape of a report to be submitted on their return.

Each sub-group should interview atleast 10 farmers to find out the reactions of the farmers to the programme. This will be in addition to the discussions and questions held with the concerned officers of the scheme. As far as possible the participants should examine whatever documents/ reports easily available. They should look into atleast 10 farm production plans a n d comment upon these plans in their reports.

Group No.1 - Personnel and training

The group should get an idea of extra as well as the regular staff working under this plan. They should study the duties assigned to the staff members. They should give special attention to the ways and means of coordination in the personnel. Training is an important factor which they should give attention to. The following are the points on which they should try to focus their attention:

1. The administrative pattern at the district level.

2. The staff at the Block and village levels.

3. Training of the key personnel.

4. Training of other staff.

5. Coordination of functions.

6. Interview 10 farmers and report on their reactions.

7. Examine 10 farm production plans and comment on the preparation and execution.

8. Any other special feature not included in the above points.

Group No.2 - Farm planning

Farm planning forms the very core of this programme. In addition to finding out statistics the members of the group should try to study the impact of these plans on the farms. They should get an idea how these plans are prepared and what kind of problems the staff has to face in this regard. The following are some of the points on which they should focus their attention:

1. Number of farm plans prepared.

2. Farm planning work - book - critical comparison with that of the Institute.

3. Importance of farm plans in the programme.

4. Procedure for their formulation.

5. Relating farm plans with credit and supply.

6. Problems faced in preparing farm plans.

7. Difficulties in executing them.

8. Reactions of the cultivators.

9. Our reactions to the whole procedure.

10. Interview 10 farmers and report on their reactions.

11. Examine 10 farm production plans and comment on the preparation and execution.

12. Any other special feature not included in the above points.

Group No.3 - Fertilisers and problems of Intensive Agricultural District Programme

Fertilisers are an important factor in increasing agricultural production. The members of the group should find out the position of fertilisers how they are being used and the procedures adopted in supplying these to the farmers. The following are the points on which they should focus their attention:

1. Scheme for green manure seed distribution.
2. Additional area under green manures.
3. Measures for improvement of farm yard manure.
4. Compost scheme.
5. Fertiliser supply scheme.
6. Problems of coordination.
7. Problems of execution.
8. Peoples participation.
9. Our analysis of the study.
10. Interview 10 farmers and report on their reactions.
11. Examine 10 farm production plans and comment on the preparation and execution.
12. Any other special feature not included in the above points.

Group No.4 - Improved seeds and godowns.

The group will study the varieties of seeds and how these seeds are supplied to the farmers and stored. The following are the points on which they should collect information:

1. Important varieties.
2. Nature of supply.
3. Number of godowns already existing.
4. Their storage capacity.

5. New godowns to be constructed.

6. Additional storage facilities available yearly.

7. Whether it is effective.

8. Interview 10 farmers and report on their reactions.

9. Examine 10 farm production plans and comment on the preparation and execution.

10. Any other special feature not included in the above.

Group No.5 - Improved implements and marketing

A study of the implements and the marketing facilities should be made in detail. The group will divide among themselves implements and marketing facilities. The following are the points on which the group may give their attention:

1. Important implements to be inroduced.

2. Scope for agricultural machinery.

3. Implement workshops.

4. Scheme of marketing in the district.

5. Development of roads and communications.

6. What are the results?

7. Interview 10 farmers and report on their reactions.

8. Examine 10 farm production plans and comment on the preparation and execution.

9. Any other special feature not included in the above points.

Group No.6 - Plant protection and horticulture

Great emphasis is laid on plant protection methods. The group should study the variety of methods used in this direction. The following are the points on which they should collect information:

1. Names of posticides, fungicides and equipment.

2. Plant protection scheme.

3. The variety and number of fruit plants to be planted.

4. Vegetable development scheme.

5. Whether plant protection and vegetable production are becoming popular among farmers.

6. Interview 10 farmers and report on their reactions.

7. Examine 10 farm production plans and comment on the preparation and execution.

8. Any other special feature not included in the above points.

Group No.7 - Finance and resources

Finance and resources are essential to make the programme successful. The group can study the number of service cooperatives and the facilities for loans that are provided for the farmers. The following suggestions can be looked into for the collection of information.

1. The total number of service cooperatives.

2. Their membership and working capital.

3. The additional loan facilities to be extended.

4. Sources of funds of the societies.

5. Role of Reserve Bank of India.

6. Linking credit with production and marketing.

7. Sharing of expenditure.

8. Area under cultivation in the district.

9. Irrigated and unirrigated area.

10. Total population.

11. The labour supply.

12. Current use of fertilisers.

13. Per acre yield of various crops.

14. Number of bullocks.

15. Number of milch animals:
cows, buffaloes & goats.

16. Interview 10 farmers and report on their reactions.

17. Examine 10 farm production plans and comment on the preparation and execution.

18. Any other special feature not included in the above points.

19. Number and breeds of poultry.

Group No.8 - Extension methods and Animal Husbandry

Scientific demonstrations are essential to disseminate information. The group members should carefully see the manner in which these demonstrations have been organised. They should try to visit the plans and find out the impact on the villagers. The following points may be noted for guidance.

1. Method demonstrations.

2. Result demonstrations.

3. Literature available.

4. Meetings and group discussions.

5. Films etc.

6. Distribution of stud bulls.

7. Arrangement for veterinary services.

8. Plan for cattle improvement.

9. Poultry development scheme.

10. Interview 10 farmers and report on their reactions.

11. Examine 10 farm production plans and comment on the preparation and execution.

12. Any other special feature not included in the above points.

Group No.9 - Evaluation

A scientific method has been proposed to evaluate the results of the programme. The group can study the machinery and the methods adopted for evaluation. Some of the following points may be used as a suggestion:

1. The machinery of evaluation.

2. The method and procedure.

3. The findings.

4. The suggestions and recommendations.

5. Interview 10 farmers and report on their reactions.

6. Examine 10 farm production plans and comment on the preparation and execution.

7. Any other special feature not included in the above points.

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