

29/06/18  
Agr 202

(CST Aspect)

**Entomology** is the branch of zoology that deals with insects.

These insects are regarded as pests in agriculture because of the havoc they wreck in agriculture.

### Methods of Insect - pest control

- Cultural Methods
- Biological Methods
- Physical Methods
- Chemical Methods

\* In the cultural method the approach is through the use of farm practices

- Weeding

- Burning

\* Physical method involves man's deliberate effort to control pest using human approach

\* Biological method is through the use of predators for prey.

\* Chemical method is the use of chemicals that has been formulated as possible to insects. They are manufactured as either stomach poisons or contact poisons. These chemicals are organochlorines or organo-phosphate.

Categories of farm insects

- Biting & chewing insects

- Piercing & sucking insects

- boring insects

\* Biting & chewing - grasshoppers, cricket

\* Piercing & sucking - Aphid, Cotton stainer

\* Their mouth parts has a needle like structure

\* Boring insects - They bore into store & products reducing their market value e.g. beetle.

### The Chemical Method (Emphasis)

It is the most common method for managing farm insects.

Equipment used are :- knapsack sprayer, materials

Part of the knapsack sprayer

- Trigger - used to draw liquid from the hose,

- It requires pressure

- Hose

- shaft

- Nozzle (adjustable nozzle)

- Shoulder strap

- Cap - filter

Water to chemical measurement

Form to 10% of water

So as not to over dilute or under dilute it

No contours to be taken before the

application of chemicals. They are -

- 1) Be properly kitted & hand gloves, Nose guard
- 2) Don't spray in the direction of the wind / spray in the evenings preferably when the wind moves eastward or westward

- 3) After spraying take a warm bath & wash clothes.
- Chemicals should be kept beyond the reach of children.

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(AEX Aspect)

### Village extension teaching Methods

Preference / cooperation for selected method

- Limitations to the use and ways of overcoming them

→ Agricultural extension is an informal method of giving

need to satisfy farmer's interest

Type less teaching methods - the way of organizing

- Individual method techniques to

- Group method

- Mass method

Individual Method - Involves face to face

- farm & home visit

- Office calls (AEX Aspect)

The way of organising and using instructional

techniques to create a situation in which the farmer

learns or in which communication takes place teacher farms

Village extension teaching Methods

Extension methods are classified into three

- Individual Method

- Group Method

- Mass Contact method

Individual method - There is face to face meeting

Contact examples are;

- Farm & home visit

- Office calls

- telephone calls

- Interpersonal letters to farmers

Group Method - If includes

- Method demonstration

- meetings & conferences

- Tours excursions

- visual aids

- Drama

- Farm Training Centre

- Result demonstration

bank

belled

goat

ISS

Mass method - Examples are:

- Radio
- Television
- Posters
- Publications
- Newspapers
- Campaign

Individual Contact Method (Reasons / importance)

- 1) It is used to find out the problem facing the farm families
- 2) To find out the strength & weakness of farmers.
- 3) It affords the extension worker the opportunity to be acquainted and make friends with the farmers.
- 4) Helps the extension workers to identify local leaders and progressive farmers

Disadvantages

- 1) It is expensive.
- 2) It takes time.
- 3) Bias towards progressive farmers.

Farm visit - This involves the extension workers visiting the farmer in his farm to see things or growing by himself so as to be able to know about the care of the problems or give possible suggestions to the solution to the problems arising.  
@ Farm visit assists extension staff to have first hand knowledge of the farmers field problems such as disease and pest problems. If enables the farmers see that innovations can be feasible because they have carried it out  
(3) Enables the extension staffs to be acquainted with the family.  
(4) It enables the farmers to feel free to discuss their problems as they are very familiar with the problems.

Office calls - This means the visit of the farmer to the office of the extension worker. The farmer makes this visit in order to receive some useful information on his farm needs.

Advantages

- 1) The caller tends to be highly responsive to learning
- 2) There is an economic use of the extension workers time
- 3) It is a sign of increasing rate of adoption in the area.

- 1) Office calls may not accurately review the problems of the farmer.
- 2) Office callers do not include in formulating

In extension activities

Group Contact method - This involves hrs or more people gathering together as a group to receive information from the extension workers

Advantages

- 1) More people are reached.

2) Saves time

Local leadership is encouraged within the group. More farmers are given the opportunity to be the result of extension messages.

Examples are: - Method of demon-

Demonstration - A clear & practical presentation of production techniques in Agriculture.

Method demonstration - Refers to the display of methods of doing an agricultural activity to farmers. Example

- 1) It can be used to present the ways of application of fertilizers, method of budding plants, ways of using herbicides, ways of weeding, plant spacing etc.

Result demonstration - Refers to the display of the result of an agricultural practice. It is also the method of showing people the result of new practice which is based on adequate research.

Advantages of Method demonstration  
The extension agents can explain simple farm skills to a large number of people at the same time. It enables the farmers to participate and feel a greater chance that they will benefit from demonstration.

Disadvantages

The extension agent must be conscious that demonstration is a learning experience and plan the event accordingly.

If there are too many farmers present, a few get the chance to see, hear & parti-

Advantages of result demonstration

It provides fast source of information for new items & practices and listening to radio, TV etc.

It is an effective method of producing project.

It gives in developing local leadership, gives confidence in agents when successful.

Disadvantages

Forming a successful demonstrator is often difficult.

If sometimes causes the jealousy of other farmers because of the frequent visit of the

extension agent to the demonstrator.

- It requires considerable time to complete

- It is not adaptable to many types of subjects matter. Selecting the method is also very important.

Tours and excursion - These are methods of extension teaching which appeals to man's desire to go to places else see things by themselves. This method offers the participants opportunity to see for themselves, concrete evidence of the value of improved practices.

Farm training centre - This is a place where farmers written to various agri-hikes are trained in concepts of modern agricultural methods and homemaking.

Mass Media Method - They are used to reach larger number of people quicker than individual group method. It is useful in making large number of people aware of new ideas at the same time.

Poster - If it is a sheet of paper or cardboards with an illustration of a few simple words and if it is desired to catch the attention of the poster buyer. It is also designed to catch the eye in such a way that it is attractive to the eyes.

Newspaper - If provides a valuable channel for transmission of educational information where they exist and where the most people receive and read them.

Television Radio  
Advantages of Mass media  
- Large number of people are reached.  
- It is a method used when people need immediate information.

Factors to be considered w.r.t.

Factors to be considered when choosing a teaching method.

- Clientele/Audience
- Classification of subject matter
- Desired change
- Need of time
- Primary function of method
- Availability method

Clientele/Audience - The extension agent needs to know the economic status of the audience before selecting the method.

Subject Matter - Extension agents should consider the level of difficulty of the subject matter and on a principle method for presenting general information could be a meeting with a guest lecturer but for comprehensive subject matter, a lecture might be more effective.

Desired change - Teaching objectives should be made the level of change desired. Objectives should be selected to match the

Feasibility of methods in terms of time, cost and availability must also be considered. Large expenditures may be justified in a priority program such as energy but for a problem localized to a small segment of clients in one area, costly techniques will hardly be appropriate.

Need & time factors - Extension agents should know the best time to teach farmers and where the interest of the farmer lies.

19/07/2018

### (Soil aspect)

Soil Survey and Land evaluation  
Rocks are formed through the solidification of molten magma from volcanic eruptions.

Factors that acts on molten magma to form rock

- Rain
- Sunlight
- Temperature
- Vegetation
- Animals
- Parent materials

Soils are formed in different locations, hence there are various parent materials & types.

Soils are deficient when they lack NPK

1 plot - 100 by 50

stop sprouts  
crops germinate

SOIL SURVEY - used to determine the site. It is a vertical cross-section of a given area of land for cultivation.

Implement for carrying out soil survey

- Ranging pole - (For range & Alignment)

- Knife - contained.

- Peg - shovel

- Beacon - Tripod.

TBM - Temporal Bench Mark

- Tape - Prismatic compass.

Types of Survey methods

- Reconnaissance

- Semi detailed

- Detailed.

Right grid survey → chain of squares

Auger Sampling → Is used for surface sampling

- Abney level; used for Survey heightening

- Core Sampler.

- Soil thermometer

- Soil Monolith.

SOIL PROFILE - used to determine the nutrient content of soil. If not properly managed becomes a hindrance to the farm.



Top Soil.

Sub Soil

Parent Material.

Bolder

O-Horizon → the horizon of organic matter

SCT  
(Aspect)

19/07/2018

Fertilizers; This is a substance added to soil to improve its fertility. It could either be solid or liquid form and it helps the growth of plant.

Types of fertilizers - Organic.  
- Inorganic.

Mode of fertilizer application

① Broadcasting Method; The farmer tills the farm for even distribution.

② Single Method

③ Compound / mixed method.

④ Ring Method; A dimension of 20-30cm from the plant.

\* Foliar; A means of melting fertilizers.

# AGR 202 Test

To be submitted  
27th July 2015

Question;

- Qa) In your farm, you are given two types of fertilizer 50kg bag of N-P-K fertilizer costs 50kg bag of organic matter to apply in your farm. Net profit of application is training period which of these fertilizers will you choose and give the reasons of your choice.
- Qb) Calculate net profit assuming we have loss of 5%. What is?
- Qc) List two (2) methods of fertilizer application
- Qd) a) What is Soil erosion  
b) Practically explain how to make compost heap and compost pit.

26/07/15

Assignment

(AEC Aspect)

Appraise a pineapple orchard based on the following 8afa value -

Output Cr (Income)

~~Output harvested cost of 1,000 stickers~~  
Sold at #200  
5% loss-

Dr (Expenditure)

\* Land acquisition (#40,000)  
\* Planting material (#38,000)  
\* Transportation (#15,000)

\* Labour

- Land preparation (#18,000)  
- Planting (#8,000)  
- Weeding (#5,000)

\* Fertilizer application

- Fertilizer (#7,500)  
- Application (#3,600)  
\* Chemicals (#)

- Pesticides

Grand Total = #122,500