

I. Product Knowledge

Topic 9a

Types of Pests

FACT SHEET

I. Product Knowledge

Topic 9a: Types of Pests

A **pest** is considered to be anything that:




- Competes with humans, domestic animals or crops for food and water.
- Injures or damages humans, domestic animals, crops or structures.
- Spreads disease to humans, domestic animals or crops.

There are certain **characteristics of pests** that we must keep in mind:

- Pests are living things.
- Living things have basic needs: air, water and food.
- Pests can only survive if their basic needs are met.
- In ideal conditions pests will, like all living things, multiply and increase in numbers.
- Pests can cause massive damage.
- Pests can be controlled.
- Prevention of pests is much better than the cure of pests.

Types of pests

We usually associate a pest with creatures like cockroaches, commando worms, locusts and rats. There are many other types. Some pests we cannot even see with the eye. We can classify them into four basic groups:

1. **Insects and insect related living organisms:** Ants, cockroaches, commando worms, and many other insects that attack crops. 
2. **Plant diseases:** Fungi, bacteria, viruses, virus-like organisms, nematodes, etc. They are also called the *silent killer* because you can't see them; you only see the damage done by them. They disrupt the normal internal processes of the plant. Fungi cause most of plant diseases in crops. 
3. **Weeds:** Grass and broadleaf weeds aggressively competes with crops for water and food. They use the plant nutrient and the crops suffer.
4. **Vertebrates:** Vertebrates are any living organisms with a spinal cord or backbone, such as mice. Rodents and birds can do much harm to crops. 

ADDITIONAL INFORMATION

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What harm cause various pests to plants and crops?

Pest type	Some pests in this category	Damage
Insects	Commando worms, aphids, maize borer fruit flies, and mites.	They eat the leaves of the plant, suck food from the plants, attach to roots and damage fruits.
Plant diseases	Fungi, bacteria, viruses, and nematodes.	Fungi cause many diseases and inhibit plant growth. Bacteria and viruses cause plant and root rot. Nematodes attach to the root system.
Weeds	Grass and various broadleaf weeds.	They are in competition with the crop plants for water, air, plant nutrients and soil. They are aggressive growers and suffocate crop plants if not treated.
Vertebrates	Rats, mice, and birds.	Rats and mice usually damage or harm stored products but also eat crop plants. Birds cause great harm to fruit and seed producing plants. Some birds also eat seedlings.

INSTRUCTIONS

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Topic 9a: Types of Pests

Materials needed

- Flip-sheet board with flip-sheets
- Markers (1 black, 1 blue, 1 green, 1 red)
- Colored cards
- Kraft paper (or other large piece of paper)

Time needed: 30 minutes

Preparations:

- Flip-sheet with the title: *Types of pests*
- A4 sheets with:
 - *insects*
 - *plant diseases*
 - *weeds*
 - *vertebrates*
- Set of pest names on colored cards (you can add local pests and diseases, make sure you have one card for each participant):
 - Insect category: *army worms, locusts, leafhopper, ants, aphids, snails, cutworms, American bollworm, mites*
 - Plant disease category: *fungi, bacteria, nematodes, viruses*
 - Weeds category: *grass, bushes, wild broadleaf plants, reeds, common couch, wild flowers*
 - Vertebrate category: *mice, rats, birds, rabbits, bats*

Set up

Attention: Ask participants if anyone loves cockroaches. They will all say: No. Ask why not? They will answer: They are dirty. Cockroaches carry diseases. They are pests.

- Title:** Tell participants the title while showing the flip-sheet with the title: *Types of pests*.
- Credibility:** Explain your experience in pest management.
- Objectives:** To explain what pests are, what their characteristics are, and what type of pests exist.
- Benefits:** If you understand the various pests and plant diseases, you will understand how to treat pests and plant diseases.
- Direction:** During this session, we will focus on the introduction to pests and plant diseases. We will not discuss how we can treat these pests and diseases.

Delivery

Explanation, Demonstration, Exercise, and Guidance:

1. Ask participants: **What is a pest?** They will name certain pests. Allow them to answer. Conclude by telling them that a pest is anything that competes with human beings, their animals or crops for food, water, shelter, or air.
2. Ask the participants: Besides competing for food, water, air or shelter, what else can pests do? Allow them to answer. Conclude by telling them that a pest can also **damage** crops and **carry diseases** that harm crops.
3. Tell the participants that there are four different types of pests:
 - a. Insects
 - b. Plant diseases
 - c. Weeds
 - d. Vertebrates
4. Paste the A4 sheets with the words *insects*, *plant diseases*, *weeds*, and *vertebrates* high on different walls (one sheet per wall). Tell participants that you are going to give them colored cards with names of insects, plants diseases, weeds, and vertebrates written on it. They have to decide in which **category** their card falls. If they have selected a category, they should stand under the A4 sheet with that category.
5. Hand the pest name colored cards to all participants (at least one card per participant.) Let the participants find their category and stand under it.
6. **Discuss** the results. Start with insects. Go to the group under the category insects and ask one person to read what is written on his/her colored card. Ask if everyone agrees that this belongs to the category with insects. If everyone agrees, ask the person **why** this pest could be **harmful** to crops. Discuss the rest of the cards in the category in the same way. Do not go too much in detail. Go quickly over all the pests.
7. Go to the plant disease category and discuss the cards in the same way. Continue with weeds and vertebrates.

Finish

- Summary:** Give a summary by quoting the definition of a pest again followed by the four main pest groups. Conclude with the words: prevention of pests is much better than the cure of pests.
- Questions:** Ask if anyone has a question or comment.
- Evaluation:** Ask them what the definition of a pest is. Ask them to name the four main groups of pests. Ask them why are weeds called pests? Ask them to name two types of plant diseases.
- Next step:** In this session, we learned about the introduction to pests and plant diseases. In the next lesson we will discuss the major pest in our region.

Distribute the **fact-sheet** to all participants.