

LESSON 29 Plant Pests and Diseases: Resources from Living Things

Grade Level: 7-10

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2. Overview Plants provide food for many forms of life. Human beings and other grazing animals depend on plants for food. It is important to note that large numbers of other much smaller creatures such as insects and their larvae also feed on plants. Insects which, feed on plants and cause damage to the plants are called pests. Plant pests vary from place to place.

3. Purpose The study of plant pests are useful and especially to farmers. The purpose of this lesson is to provide information on plant pests. Control of plant pests is important.

4. Objectives Students will be able to:

- i. Identify plant pests in their farming community
- ii. Explain how these pests affect plants
- iii. Discuss control measures for insect pests

5. Resources/materials

- Live or preserved samples of plant pests found in the community.
- Charts showing different kinds of plant pests.

6. Activities and Procedures This lesson, coming immediately after the lesson on human diseases brings out the fact that plants like humans, suffer from some kinds of diseases. The definition which the farmer gives to plant pests is relevant here. *Plant pests, from a farmer's point of view, are those living organisms which reduce the productivity of crops, either directly by eating them or indirectly by spreading diseases among them.* The teacher should now guide the students to list and collect plant pests in the their community.

The explanation of how these pests affect plants should follow. This will lead to the types of insect pests:

- Biting and chewing (tissue eating) insect pests-locust, weevil
- Piercing and sucking (sap-sucking) insect pests-red spider
- Borers (Boring pests).

There is however one other type of plant pest called **nematodes**. They are also known as eelworms. They attack the roots of plants and cause swellings called knots in which they live. Nematodes inhibit growth, which in turn leads to stunted growth and wilting. The teacher should now introduce the parasitic fungi which can attack all parts of a plant. The common disease caused by fungi are *mildew, leaf spot and rust*. The teacher should arrange to bring in an Agricultural Extension worker to come and give a talk about plant pests to the students.

This lesson should be concluded by discussing control of plant pests and diseases. The two common methods used should be discussed:

- Cultural Control (Good management)
 - i. crop rotation
 - ii. early planting
 - iii. fertilizing
 - iv. weeding
 - v. removing crop residue
- Chemical control. Insecticides, herbicides and fungicides are used to control insect pests, weeds, and fungi infection.

7. Tying it all together The health of plants is as important to us as our own health.

8. Assessment The teacher should find out what influence the lesson has had in farming practice first in the school and then in the community.

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10. References Croft, G et al. (2000). **Step Ahead 'O' Level Integrated Science**. Harare: Longman Zimbabwe (Pvt.) Ltd.

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