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Curriculum for Agricultural Science Education

Principles of Agricultural Science – Plant

Plant Pests

Unit 8 – Surviving a Harsh Environment
Lesson 8.1 Pesky Bugs and Plants

Plant Damage

How can pests cause negative effects on plant growth, production, and overall health?

- Take away resources
- Eat plant tissue
- Eat seeds and fruit
- Bore holes
- Remove fluids

- Retard growth
- Degrade plant tissue quality
- Disrupt metabolic processes
- Others?

Observe, Diagnose, and Prevent

Plant damage is easy to mitigate with knowledge of:

- Pest types
- How pests cause damage
- How to eradicate or deter pests
- Pest life cycles

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Types of Pests

- Insects
- Mollusks
- Nematodes
- Vertebrates
- Weeds
- Disease Agents

Insects

Different kinds of insects have different eating habits:

Chewing

Sucking

Boring

Mollusks and Nematodes

Mollusks include snails and slugs

Nematodes – soil-borne wormlike organisms

Vertebrates

Vertebrates include birds and rodents

Weeds

- Hinder target crops by competing for water, space, light, and nutrient resources.
- Undesirable plants, sometimes simply growing in the wrong place at the wrong time.

Disease Agents

Bacteria, viruses, and fungi

Although plant disease agents are organisms and considered pests by definition, they hold a special distinction that will be examined more closely in *Lesson 8.2 Diving into Diseases*.

Methods of Pest Control

- **Biological**
  - Lady bugs and parasitic wasps
- **Chemical**
  - Herbicides, pesticides, and repellents
- **Cultural Practices**
  - Crop rotation, clean equipment, and quarantine
- **Physical/Mechanical**
  - Cultivators, hoes, and mowing

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References

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