

Instructional Scenario

Ridding a Greenhouse of Pests



Course/Duty Area: Operating the Farm Business/Understanding Pesticide Use and Safety

Scenario:

Mr. Dews is a commercial wholesale nursery producer. His business has 20 greenhouses for raising annuals and perennials for area landscapers. When scouting his Liriope, Mr. Dews notices ants in his greenhouse. Upon further inspection, he sees that many of the plants have curling leaves with a sticky residue. He determines that his greenhouse is infested with aphids. He hires you to help him get rid of the infestation.

What should Mr. Dews do to minimize the damage caused by aphids?

Big Question:

What methods of control can producers use to regulate the damage to crops caused by insects?

Focused Questions:

- What types of cultural, chemical, and biological control measures are appropriate?
- When should pesticides be used?
- What safety considerations need to be implemented to protect the environment, the applicator, and the public during the pre-application, application, and post-application stages of pesticide use?
- What personal protective equipment items are required when applying pesticide?
- What legal responsibilities does the pesticide applicator have?
- What type of records should the applicator keep?
- What procedures should the applicator follow?
- How should pesticides be stored and disposed of?

Student Project or Outcome:

Students will design a business profile for a greenhouse pesticide custom applicator. They will include information that illustrates common safety procedures to be followed, personal protective equipment, and recordkeeping requirements. They may also include employer information, salary, and training requirements.

Project-Based Assessment:

- Students should research common pesticides used in greenhouses. They should analyze the labels to look for key information, such as common name, active ingredients, EPA Establishment Number, EPA Registration Number, re-entry interval guidelines, required personal protective equipment, emergency information, and crop-specific application guidelines.
- Take a field trip to a company that specializes in pesticides, such as exterminators, crop production, or farm stores. Review their pesticide application program and safety procedures.
- Have students work together to calibrate a sprayer or fertilizer applicator for your lab spaces (e.g., greenhouse, land lab, athletic fields). Only use clean equipment and water. Practice using appropriate personal protective equipment.

Teacher Resources:

- [Virginia Tech Pesticide Programs](#)
- [Pesticide Applicators](#), Penn State Extension
- [Virginia Pesticide Safety](#), Office of Pesticide Services, Virginia Department of Agriculture and Consumer Services
- [USDA Agricultural Marketing Service – Pesticide Record Keeping](#)

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