

Instructional Scenario

Plant Nutrition



Course/Duty Area: Introduction to Plant Systems/Investigating the Principles of Plant Nutrition

Scenario:

A greenhouse operation is losing thousands of dollars due to poor plant health. You have been hired as a plant nutrition specialist to diagnose the issue and create a fertilization plan.

Big Question:

What are the common nutrient deficiencies in plants, and what are their symptoms?

Focused Questions:

- What symptoms is my plant showing?
- What are the remedies for this nutrient toxicity or deficiency?

Student Project or Outcome:

Students will be given pictures of plants in poor nutritional health or actual plants in poor health. Students will be given a chart of macronutrients and micronutrients and will fill in the symptoms of deficiency and toxicity in the plants. From the photos or actual plants, they will determine the plant's nutrient deficiency. They will then create a fertilizer plan to help prevent plant-health problems. In a presentation, students will explain which nutrients are to be added and the method for adding them.

Teacher Resources:

- Photos of plants with nutritional deficiencies or real plants with such deficiencies.
- Handouts with macro- and micronutrient charts and other resources about fertilizing methods.

Scenario submitted by Liz Borst, Sherando High School, Frederick County Public Schools