Course Title: Plant Protection
Catalog #: HO41
Section #: 6052
Instructor: Prof. Keith Henn
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Objectives:
1. Explain the nature of plant protection.
2. Contrast the differences between environmental, disease, insect and weed problems in plants.
3. State how to diagnose environmental plant problems and how some of them can be solved.
4. Distinguish between a disease symptom and sign.
5. In terms of plants, define disease.
6. State the causes of plant diseases.
7. Define a vector of plant diseases.
8. State and explain the various methods for controlling plant diseases.
9. Explain the various stages in a disease life cycle.
10. Given various plant diseases, explain their causes, life cycles and controls.
11. In terms of metamorphosis, identifying characteristics and characteristic plant damage, explain the nature of insect pests.
12. State and explain the various controls used to eliminate insect problems.
13. Given specific insect plant pests, explain their characteristics, life cycles and controls.
14. Explain why weeds need to be controlled.
15. Contrast the various weed types.
16. Identify various given weeds.
17. State and explain the various controls used to eliminate weed problems.
18. Outline weed control programs for various types of horticultural operations.
19. Given specific weeds, state how they can best be controlled.
20. Identify the various types of equipment used to apply pesticides.
21. Explain how to safely handle and use pesticides.

Tentative Outline:
I. The Nature of Plant Protection. Protection From What?
   a. Environmental and cultural problems
   b. Diseases
   c. Insects
   d. Weeds
   How plants can be protected from the above. Solving environmental and cultural problems.
   a. Diagnosis – Distinguishing between environment, insects and disease damage
   b. Solving through:
      1. Plant cultural requirements
      2. Modifying the plant environment

II. Plant Diseases
   a. Disease symptoms and signs
   b. The causes of plant diseases
      1. Bacteria
      2. Fungi
      3. Vectors of disease
   c. The development and spread of plant diseases
      1. Disease life cycles
   d. The control of plant diseases
1. Cultural
2. Chemical
3. Plant selection

Summary: Specific plant diseases – their causes, life cycles and control.

III. Insects
  a. Types of insect damage
  b. Insect characteristics
     1. Orders of insects
        a. Metamorphosis
        b. Characteristics
        c. Type of mouth parts and their characteristic plant damage
  c. Crustacea and Arachnida
     1. Characteristics
     2. Plant damage
  d. Controls
     1. Cultural
     2. Plant selection
     3. Chemical
     4. Biological

Summary: Specific plant damaging insects – their characteristics, life cycles and control.

IV. Defining Weeds
  a. Why control weeds
     1. Appearance
     2. Money
     3. Control of pests
  b. Types of weeds
     1. Broadleaf
     2. Grass
     3. Annual
     4. Perennial
  c. Weed identification
     1. The common weeds
  d. Weed control
     1. Cultural
     2. Chemical
     3. Weed control in the:
        a. Lawn
        b. Greenhouse
        c. Nursery
        d. Garden center

Summary: Specific weeds – their characteristics and their controls.

V. Pesticide Safety and Application Equipment

Attendance:
More than 6 hours of unexcused absences will be cause to drop the student from the class.

Grading:
3 exams (lowest dropped) .................. 70%
Final exam (cumulative) ..................... 30%

* No make-up of exams due to absence.

The course will place great emphasis on application of the course information to practical horticultural problems and situations.