



Western Technical College

10006120 Pest Management Principles

Course Outcome Summary

Course Information

Description	This course will emphasize common and some specific methods of identifying diseases, insects and weeds in agronomic crops. Common problems associated with diseases, insects and weeds will be studied. Appropriate control techniques will be discussed and analyzed. Integrated Pest Management (IPM) along with sustainable principles, practices and techniques will be evaluated.
Career Cluster	Agriculture, Food and Natural Resources
Instructional Level	Associate Degree Courses
Total Credits	3
Total Hours	72

Textbooks

Pest Management in Wisconsin Field Crops: A Guide to Managing Weeds, Insects, and Diseases in Corn, Soybean, Forages, and Small Grains. Copyright 2020. Nice, Glenn. Publisher: University of Wisconsin Extension. Required.

Learner Supplies

WI State Certification Commercial Applicator Training Manual (Category 1.1). **Vendor:** State WDATCP website. Required.

Success Abilities

1. Live Responsibly: Develop Resilience
2. Live Responsibly: Embrace Sustainability
3. Refine Professionalism: Improve Critical Thinking

Program Outcomes

1. Interact as a professional in Agribusiness.

2. Investigate opportunities in Agribusiness.
3. Apply relevant technologies.
4. Apply economic and marketing strategies to Agribusiness Industry.
5. Create a Crop Management Plan.

Course Competencies

1. Evaluate the significance of IPM and sustainable control measures

Criteria

You will know you are successful when

- 1.1. you explain the concepts and principles of IPM goals.
- 1.2. you determine the impact IPM has on overall effectiveness of control measures.
- 1.3. you classify the four (4) basic principles for effective IPM.
- 1.4. you determine needed control tools necessary for successful IPM.

Learning Objectives

- 1.a. Explain the concepts and principles of IPM goals.
- 1.b. Acquaint self with the evolution of IPM.
- 1.c. Determine the impact IPM has on overall effectiveness of control measures.
- 1.d. Classify the four basic goals of IPM.
- 1.e. Correlate the four (4) basic principles for effective IPM.
- 1.f. Incorporate all available control tools available necessary for successful IPM.

2. Differentiate the use of certain chemical compounds as harvest aids and plant growth regulators

Learning Objectives

- 2.a. Define harvest aid chemicals.
- 2.b. Identify the two classes of harvest aids (defoliant - desiccants).
- 2.c. Define plant growth regulators.
- 2.d. Explain plant growth regulator functions.

3. Identify common insects that are problems in different agronomic crops.

Learning Objectives

- 3.a. Identify common insects that are problems in corn
- 3.b. Identify common insects that are problems in soybeans
- 3.c. Identify common insects that are problems in alfalfa
- 3.d. Calculate economic thresholds for different insects

4. Outline how diseases develop.

Learning Objectives

- 4.a. Diagram the disease triangle
- 4.b. Explain how temperature and humidity impact disease development

5. Identify common diseases for different agronomic crops.

Learning Objectives

- 5.a. Identify common diseases in corn
- 5.b. Identify common diseases in soybeans
- 5.c. Identify common diseases in alfalfa
- 5.d. Recognize the difference between a disease and environmental damage
- 5.e. Calculate economic impact of diseases

6. Analyze the growth stages of weeds.

Learning Objectives

- 6.a. Explain how an annual, biennial, and perennial develop
- 6.b. Explain how environment impacts weed growth

6.c. Explain how weeds develop into a problem in a given area

7. Identify common weeds found in agronomic crops.

Learning Objectives

- 7.a. Classify the weeds as an annual, biennial, or perennial
- 7.b. Recognize weeds that are considered noxious in the state of Wisconsin
- 7.c. Identify different growth stages of the common weeds

8. Demonstrate different methods of crop scouting.

Learning Objectives

- 8.a. Justify the importance of time and time management for scouting practices
- 8.b. Explain random testing
- 8.c. Demonstrate how to sweep an alfalfa field
- 8.d. Demonstrate how to make a weed map
- 8.e. Create a crop scouting calendar
- 8.f. Complete a crop scouting report

9. Recommend management procedures for different pests.

Learning Objectives

- 9.a. Explain mechanical, biological, cultural, and chemical control practices
- 9.b. Explain different pesticide classifications
- 9.c. Recognize the names of various pesticides and which pests they control
- 9.d. Define terms associated with plant breeding and pest management
- 9.e. Discuss how a pest develops resistance to a pesticide and what can be done if you have a resistant pest
- 9.f. Explain timing applications of pesticides
- 9.g. Recommend application rates of pesticides by reading and understanding a pesticide label

10. Outline an integrated pest management program.

Learning Objectives

- 10.a. Define Integrated Pest Management
- 10.b. Explain the different styles of application use from the past to present day
- 10.c. Explain mechanical, biological, cultural, and chemical control practices
- 10.d. Develop an integrated pest management control program for a farm