BEGINNING FARMERS

IPM/Pollinators

Activity 4: Weed Proceedings

In this activity, students will "take weeds to court" to understand core tenets of integrated weed management in vegetable production at multiple scales. Students will also learn how to identify common species in a field setting with guides or phone apps.

KEY TERMS

Cotyledon: The first leaves that emerge from the soil. Most broadleaf plants have two, while grasses and sedges have just one.

Annual: Plants that germinate from seed, grow, flower, set seed and die within a year.

Biennial: Plants that germinate from seed and grow in one year, then flower, set seed and die in their second year. Most die back to the ground in winter before regrowing.

Perennial: Plants that germinate from seed and grow continuously through the years, flowering and setting seed as conditions allow. Some die back to the ground every winter and live on from their root system.

SUPPLIES NEEDED

READ (click or scan QR code)
- Weed Seedling Identification Guide for Montana and the Northern Great Plains (87 pages)

BRING
- Pictures of your own with or without explanation of the issue
- Boots
- Hat
- Sunscreen
- Rain gear
- Water
- Notebook
- Writing utensil

How do you do this?

PRE-CLASS
Step 1. Read the resource titled, Weed Seedling Identification Guide for Montana and the Northern Great Plains. This Montana State University resource is organized in a strategically helpful way, assuming you do not already know the name of the weed and only have leaves to guide you to the answer.
Step 2. Come to session prepared to discuss observations of and factors contributing to disease issues in plants. Some pictures of disease issues will be prepared for you, but please consider sharing any you may have as well.

IN-CLASS
Step 3. Go outside to observe foliage of crops. Practice taking a tissue sample. Do you have an insect identification app?
Step 4. Observe how to fill out an MSU Plant & Pest Diagnostics lab form and package properly for shipping.
Step 5. Fill out the evaluation.

What does it mean for my farm?

This section is for understanding and discussing the observations with a fellow farmer or educator. What do the observations indicate? How can the results help to improve farming practices?

- What management tools/methods are there for decreasing weed proliferation at each stage of the weed life cycle (seed production, dispersion, persistence, germination, emergence, growth)?
- How much of a weed problem is tolerable?
- Are the weeds making harvests more difficult or preventing dew from evaporating?
- Are they a perennial, biennial, or annual?
- Are they in the same botanical family as the crop (potential pest vector)?
- What are the best times and techniques for management?
- Are the weeds a flowering plant in a drive row hosting beneficial insects that are attacking pest insects?
- One technique for understanding environmental stressors on crops is to look at the weeds surrounding crops too. If they are also exhibiting similar symptoms of stress as your crop plants, it is likely that the issue is larger than a single disease or insect outbreak. Issues like hail, high winds, or herbicide drift can damage plants without discrimination.

Evaluation

1. Circle how much you would agree with the following statements

- **The material covered was relevant to the my interests and objectives.**

  strongly disagree   disagree   neither agree nor disagree   agree   strongly agree

- **The facility was adequate for the educational sessions/hands-on field activities.**

  strongly disagree   disagree   neither agree nor disagree   agree   strongly agree

- **The presenters clearly delivered the material and fielded audience concerns/questions.**

  strongly disagree   disagree   neither agree nor disagree   agree   strongly agree

- **I learned useful material that I can implement on my operation.**

  strongly disagree   disagree   neither agree nor disagree   agree   strongly agree

- **I have gained resources that will help me find solutions to crop management challenges.**

  strongly disagree   disagree   neither agree nor disagree   agree   strongly agree

Evaluation

2. What did you like about the program?

3. What do you think can be improved about the program?