

I.

Product Knowledge

Topic 15a

Introduction to Weed Pests

FACT SHEET

I. Product Knowledge

Topic 15a: Introduction to Weed Pests

We can define a **weed** as any plant:

- Growing where it should not grow.
- With the same needs as the planted crops.
- With the same biology and internal processes as ordinary crops.

Why are weeds a problem?

Weeds **compete** with crops because they need the same nutrients, water, and soil as the crops. Weeds are fast, aggressive growers and produce large volumes of seeds that enable them to grow quickly into numerous plants.

Types of weeds

Weeds can be classified into two types:

1. Broadleaf weeds

Broad leaf weeds have roots, stems, branches, and leaves.



2. Grass weeds

Grass weeds are exactly what the name says: different types of grasses with long narrow leaves.

To keep weeds from using nutrients, water, and air needed by the planted crops, they must be **controlled**. There are three basic options to control weeds:

1. **Mechanical control:** Weeds are removed either by hand, hoeing, or tilling. Mechanical weed control is time consuming but very effective. You remove the weed plant immediately.
2. **Chemical control:** Weeds are sprayed with herbicides, which disturb the weed's internal processes. The weed usually stops growing and dies.
3. **Mulching:** The planting area, except for the crop plants, is covered by straw, sawdust, or plastic. Because of the cover, sunlight will not reach the weed seeds and they will not germinate. It is used in specialized crops.





Weed management

It is important to know what types of weeds are in the fields during each planting season. Plan ahead and use the best weed control option.

ADDITIONAL INFORMATION

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Different life cycles for different weeds

Weeds have different life cycles. Some weeds will last only one season before they die, while others can live for years. The different life cycles of weeds can be classified into:

- **Annuals:** Annual weeds take 1 year to complete the life cycle. They germinate, flower, and die in a period of 1 year.
- **Biennials:** Biennial weeds take 2 years to complete the life cycle. In the first year they germinate and grow. In the second year they flower, produce fruit or seedpods, and die.
- **Perennials:** Perennial weeds live for several years. During this period the plant will produce flowers, fruits or seedpods several times.

INSTRUCTIONS

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Materials needed

- Flip-sheet board with flip-sheets
- Markers (1 black, 1 blue, 1 green, 1 red)

Time needed: 45 minutes

- Preparations:**
- Flip-sheet with the heading *Introduction to weed pests*
 - Sample of a broadleaf weed and a grass weed
 - A glass with water and 6 cookies

Set up

- Attention:** Tell participants that in one of the previous sessions we discussed the different types of pests, and weeds were one of the types.
- Title:** Tell participants the title while showing the flip-sheet with the title: *Introduction to weed pests*.
- Credibility:** Explain your experience in pests.
- Objectives:** To explain what weeds are, what types exist, and why they are a problem.
- Benefits:** Knowing what weed pests are and why they are a problem will help agro-dealers understand the importance of weed control.
- Direction:** During this session, we will discuss weed pests only. We will not discuss any other type of pests or how to control them.

Delivery

Explanation, Demonstration, Exercise, and Guidance:

1. Volunteer 2 that he/she is a weed. Put one glass of water and six cookies on a table. Let the weed and crop plant sit opposite of each other with the glass of water and cookies between them. Tell the crop plant that he/she can start to eat the cookies and take a sip of the water when you say "Go." The only rule is that after each cookie and sip of water, he/she needs to count from one to five before another cookie and sip of water can be eaten. Tell the weed plant that he/she can start to eat the cookies and take a sip of the water when you say "Go." He/she does not have to count to five.
2. Start the role-play. The result will be that by the time the crop plant takes his/her second cookie, the weed already consumed four cookies and drank most of the water in the glass.
3. Ask the participants if this exercise was fair to the crop plant. They will say no. Conclude by telling them that this is what happens every day in our fields. Weeds grow much faster than crops and use more water and nutrients than the crop.
4. Tell the participants that **weeds** can be compared to parasites. A parasite exploits other living organisms to stay alive by taking food and other things. Weeds do the same with crops. Tell them that weeds are very similar. Weeds **compete** with crops because they need the same nutrients, water, and soil as the crops. Weeds are fast, aggressive growers and produce large volumes of seeds that enable them to grow quickly into numerous plants. In short, weeds:
 - a. Grow where they should not grow.
 - b. Have the same needs as the planted crops.
 - c. Have the same biology and internal processes as ordinary crops.
5. Tell the participants that there are **two types of weeds**. Ask if someone can mention the two types. Lead them to broad-leaf weeds and grass weeds. Explain what they are and show the samples of broad-leaf weeds and grass weeds.
 - a. **Broad-leaf weed:** Broad-leaf weeds have roots, stems, branches, and leaves
 - b. **Grass weed:** Grass weeds are exactly what the name says: different types of grasses with long narrow leaves
6. Hold the two samples up and ask the participants: How can we **control** these weeds? Collect answers and write them on a flip-sheet. Lead them through discussions to:
 - a. **Mechanical control:** Weeds are removed either by hand, hoeing, or tilling. Mechanical weed control is time consuming but very effective. You remove the weed plant immediately.
 - b. **Chemical control:** Weeds are sprayed with herbicides, which disturb the weed's internal processes. The weed usually stops growing and dies.
 - c. **Mulching:** The planting area, except for the crop plants, is covered by straw, sawdust, or plastic. Because of the cover, sunlight will not reach the



weed seeds and they will not germinate. Mulching is used in specialized crops.

Finish

- Summary:** Repeat that weeds are plants with the same needs as crop plants. They also need food, water, and soil to grow and therefore compete with crop plants. Repeat the two types of weeds and what they are. Mention the three ways to control weeds.
- Questions:** Ask if anyone has a question or comment.
- Evaluation:** Ask them what a weed is and why they are a problem. Ask them to name the two types of weeds and what three methods control them.
- Next step:** In this session, we discussed three ways of controlling weeds. In the next session, we will discuss chemical weed control.

Distribute the **fact sheet** to all participants.