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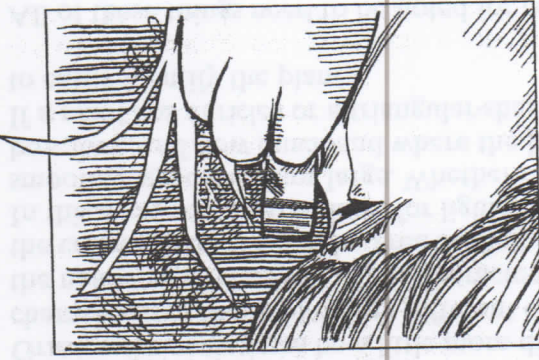
Basic Weed Identification

GEMPLER'S™ IPM PRODUCT TIP SHEET - No. 9

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Key Points:

- What is a weed?
- What are the treatment options?
- How do you identify different weeds?
- What tools are needed?
- How do you scout for weeds?



Note: This Tip Sheet is for general guidance only. Contact your County Extension agent or land grant university for additional information on weed identification and management in your area.

What is a weed?

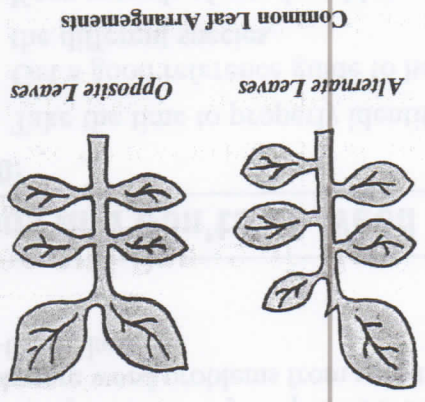
A weed is a plant in an undesirable location. Corn can be a plant in your cornfield but in a bean field it is normally considered a weed. Weeds can rob your desired plants of nutrients, moisture and sunlight, causing lower production and profits. Weeds can also harbor insects and diseases and contaminate grain.

What are the treatment options?

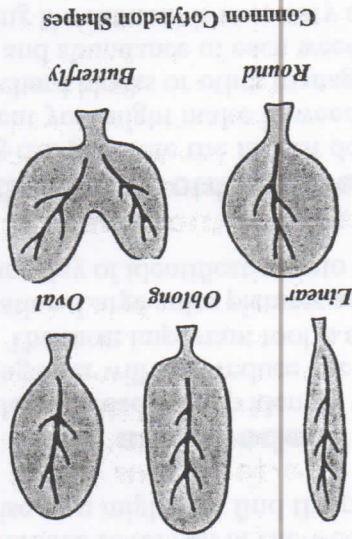
Did you know that over 80 percent of all pesticides used today are herbicides? Herbicides are only one of many weapons in your arsenal against weeds. Other methods of control are mechanical, cultural and biological. Mechanical control means physically removing the weeds by hand weeding, hoeing, cultivation, mowing or flaming. Cultural treatments are ways of removing weeds over time by the way we plant with crop rotation and/or crop competition. Biological treatments use natural enemies of the weed for control.

How do you identify different weeds?

Weeds can be broken into two main categories: Broadleaves and grasses. Broadleaf weeds are identified by those features that make them different than grasses. For seedlings, this primarily is done by examination of the cotyledon or seed leaf. Cotyledons are the first pair of leaves to emerge. The shape of the cotyledon is a way to initially identify different broadleaf plants. Plants can have linear, oblong, oval, round or butterfly-shaped cotyledons and different extremes of each. The next step in the identification of broadleaves is to notice other features of the plant. Do the true leaves attach on the stems alternately or opposite of each other? How do the leaves attach to the petiole? Are the leaves waxy or hairy, thick or thin? What type of root system does the plant have? A single taproot, tuber, or rhizome can help distinguish between two similar plants.



Common Leaf Arrangements



Common Cotyledon Shapes

(Continued on back)

Basic Weed Identification

Grasses can sometimes be a little more difficult to identify. The characteristics that make each different can be very hard to see with the naked eye. Nearly all of the characteristics for grasses are found in the collar region. This is the area of the blade that bends off of the stem. In this area, you need to look for ligules and whether they are absent, smooth, jagged, small or large. Whether or not the area is hairy and how long, and how much and where the hair is found are all important. If a plant has auricles or a triangular-shaped stem, this is a quick way to easily identify the plant.

All of these things need to be noted for correct identification of any weed. Once you know all of the features of the weed species you would like to identify, there are many books, pamphlets and charts to compare your findings. Weeds can vary from region to region, so make sure your reference covers all of the weeds that can be found in your area. Otherwise, you might not find the plant you want to identify listed.

What tools are needed?

Very little is needed to help identify weeds. A general purpose 10x or lower magnifier will help reduce eye strain while studying grass collar regions. The most important tool is a good reference guide to weed identification. Large color pictures and in-depth descriptions can turn a long day of identification into a quick glance at a book.

How do you scout for weeds?

Scouting can generate the largest dollar return of any investment you might make in weed management. Walking fields, orchard blocks or other management units to note the location and abundance of each weed species found is essential in deciding if treatment is necessary and, if so, which control option is best. Complete this process in late season when it's still possible to walk through the crop. Repeat the process early the next season, and use the information to make last minute adjustments to your plan. Save all of your information to compare weed problems from year to year and to improve long-term planning.

Dos and Don'ts of Weed Identification

<p>DO:</p> <ol style="list-style-type: none"> 1. Take the time to properly identify weeds. 2. Get a good reference guide to help identify the different species. 3. Keep records of weed problems to compare from year to year. 	<p>DON'T:</p> <ol style="list-style-type: none"> 1. Forget about other control methods, in addition to chemical controls. 2. Think that plants cannot be identified as seedlings. 3. Only scout for weeds once in the season, thinking that you will find all of the problems.
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A good reference guide is essential for proper weed identification.

