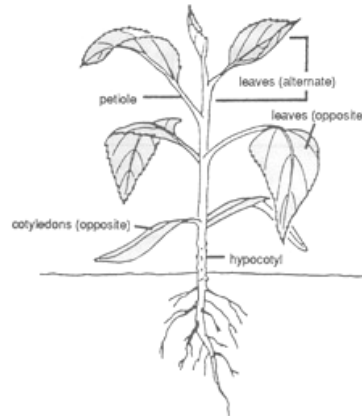


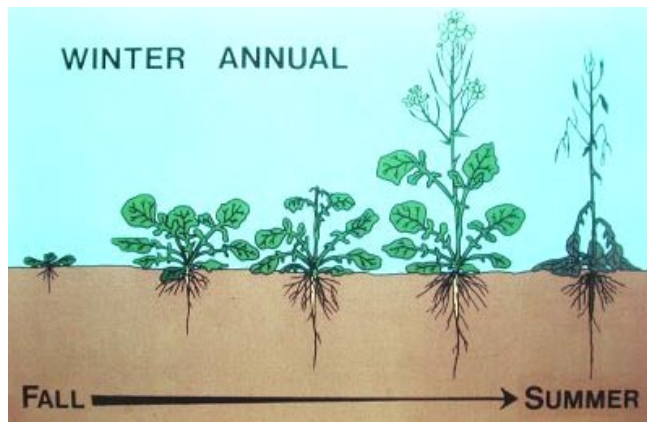
Weed Management—Competency Area I

Authors: Ron Ritter and Christie Hurt

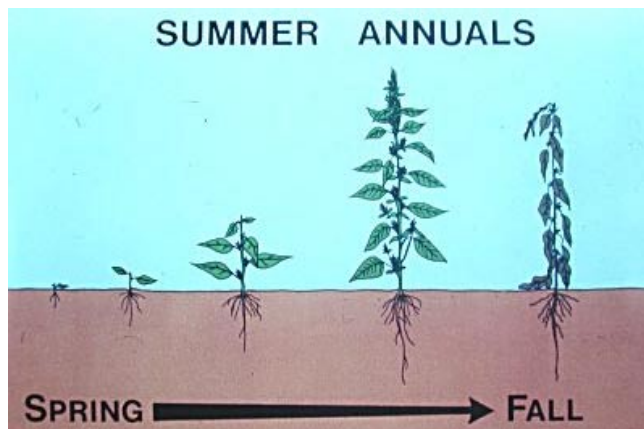
- **Annual:** plants completing lifecycle within one growing season; best controlled during seedling stage
 - Broadleaf



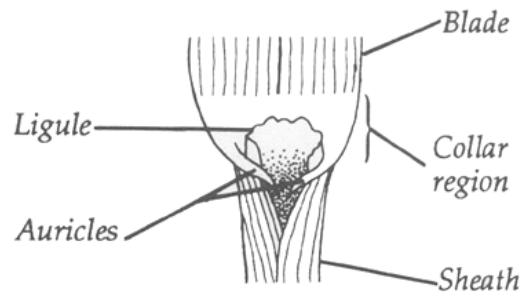
- Winter annual (broadleaves): germinates late summer or early fall, then overwinters as a seedling or small plant, then resumes growth in the spring



- Wild Onion-full round stem
- Henbit-square stem,
- Garlic-hollow, round stem

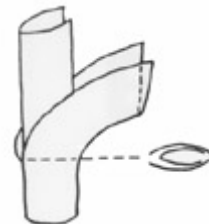


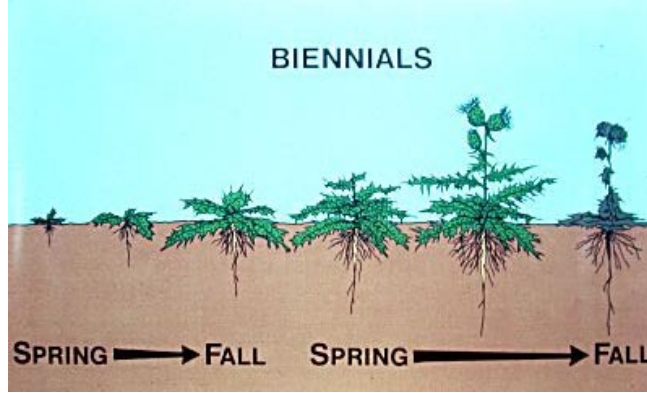
- Summer annual: germinates in the spring and continues growth until fall
 - Small seeded broadleaves:
 - Pigweed-normally pinkish-red stem
 - Lambsquarter-gray, mealy coating on leaves
 - Ragweed-deeply lobed leaves
 - Giant ragweed-large, normally three-(sometimes five-) lobed leaves
 - Smartweed-sheathing stipules
 - Large seeded broadleaves:
 - Cocklebur-two seeds/bur, but both never germinate each year
 - Jimsonweed-rank smell, unevenly toothed leaves, trumpet shaped flowers
 - Velvetleaf-trichomes raise up spray droplets from leaf surface
 - Ivyleaf morningglory-leaves resemble those of ivy
 - Tall morningglory-heart shaped leaf
 - Pitted morningglory-no trichomes
 - Burcucumber
 - Spurred anoda-leaves look like arrowheads or are lance-shaped, spurs on fruit
- Grasses—aboveground parts consist of leaf blade, ligule, sheath, and collar



collar

- Fall panicum-hairy underside early, later smooth
- Foxtail-blade with hairs
- Giant foxtail-is hairy later
- Yellow foxtail-folded in bud (at right)
- Crabgrass (two types)-hairy and smooth, membranous ligule
- Barnyard grass-no auricles or ligules





- **Biennial:** plants requiring two growing seasons to complete lifecycle; best controlled during seedling or rosette stage
 - Musk thistle-wavy leaf margins with yellow spines

- **Perennial:** plants requiring more than two growing seasons to complete lifecycle; best controlled during seedling, bud, or regrowth stages
 - Simple: only has a taproot (ex: dandelion)
 - True: has rhizomes and stolons (ex: milkweed, dogbane, honeyvine milkweed, horsetettle)
 - Broadleaf
 - Curly dock-leaves twisted
 - Broadleaf dock-“butt to petiole”
 - Canada thistle-rhizomes and pappus (windblown seed head)
 - Grasses—aboveground roots: stolons, belowground roots: rhizomes
 - Johnsongrass-rhizomes and large membranous ligule
 - Quackgrass-rhizomes and clasping auricles
 - Bermudagrass-stolons and hairy ligule
 - Sedges—triangular stem
 - Yellow nutsedge-stem yellowish, has tubers



To learn more about grass and broadleaf weeds, go to:

<http://www.agron.iastate.edu/~weeds/Ag317-99/homepage.html>

To see photos of the weeds, go to: <http://www.rce.rutgers.edu/weeds/>