Weed Management—Competency Area I
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- **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
  - 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, horsemintle
    - 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](http://www.agron.iastate.edu/~weeds/Ag317-99/homepage.html)

To see photos of the weeds, go to: [http://www.rce.rutgers.edu/weeds/index.html](http://www.rce.rutgers.edu/weeds/index.html)