



# **Controlling Lawn Weeds in Utah**

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# What is a weed?

- **A plant that interferes with management objectives for a given area of land at a given point in time. (A plant out of place)**

» J.M. Torrell

# Principal Weed Groups

- **Grass**
- **Broadleaf**
- **Sedge**

# Grass

- **Jointed hollow stems**
- **Parallel veins**
- **Fibrous root systems**
- **Leaf blade several times longer than wide**
- **Most seed heads similar to grains**
- **Example: Foxtail and quackgrass**

# Grass

# Broadleaf

- **Showy flowers**
- **Network of small veins originating from a principal vein that divides the leaf in half**
- **Strong main root or taproot**
- **Some have fibrous root systems**
- **Example: Dandelion and knotweed**





# Sedge

- **Grass-like**
- **Three-cornered stems**
- **Leaves extend in three directions**
- **Neither true grasses or true broadleaves**



# Annuals

- **Germinates from seed, grows, matures, and dies in less than 12 months**
- **Control with a preemergence herbicide**
- **Winter annuals grow in the fall and mature the following spring**
- **Summer annuals grow in the spring and mature in the fall**

# Annual broadleaf (left) Annual grass (right)



# **Two Seasons of Annual Weeds**

- **Summer**—these weeds grow and mature when the weather warms in the summer, and are dormant during the cool seasons.
- **Winter**—these weeds grow and mature during the cool season (usually spring and fall), and are dormant during the heat of the summer.

# Summer annual (purslane)



# Winter annual (*Tinella* Mustard)



# Biennials

- **Take two years to complete life cycle**
- **Form rosette and store food first year**
- **Flower second year**
- **Effective control is applied in the first year**
- **Early season application before bloom is necessary for control in the second year**





# Perennials

- **Live more than two years**
- **Effective control is applied to actively growing foliage**
- **Control early (30 to 40 days after spring growth begins) before plants become perennial**
- **For many plants spray in the fall**

# Perennial (field bindweed)



# Cool Season

- **Grow best during cool periods**
- **Mature or go dormant during the hottest part of the summer**
- **Winter annuals are cool season weeds**
- **Chemical control must be applied before plants set seeds**

# Cool season (Bur Buttercup)



# Warm Season

- **Remain dormant until temperatures warm**
- **Most start growing in April, May or June**
- **They remain dormant 45 days longer than bluegrass**
- **They turn brown 30 days before cool season grasses**

# Warm Season (spurge)

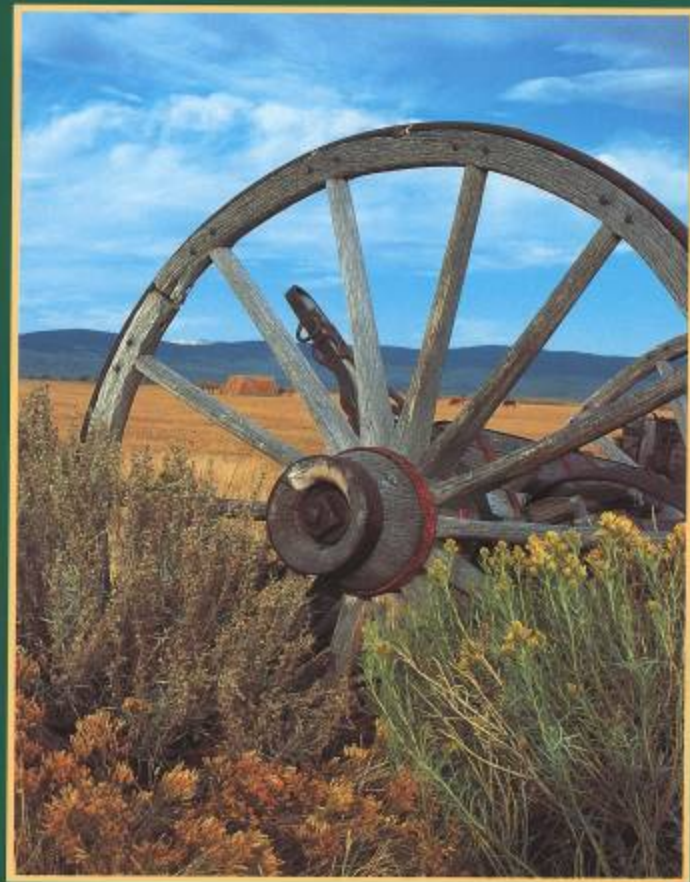


# Identification Aids

- **Pictures**
- **Distinctive characteristics**
- **Growth habits**
- **Annual, biennial, or perennial**
- **Cool or warm season**



# Weeds of the West



# **IPM Management of Weeds in Turf**

- **Mowing**
- **Fertilization**
- **Irrigation**
- **Seed and Sod Selection**
- **Traffic Management**

# **Types of Weed Control**

- **Cultural Control**
- **Mechanical Control**
- **Chemical Control**

# Cultural Control

- **Remember, all weeds need space, water and sunlight to survive.**

# Cultural Control

- **The best weed control is healthy turf. Many weeds are poor competitors and grow best where turf is damaged**



# Cultural Control

- **Fertilize lawns with the right amount, right nutrients and at the right time.**



# Cultural Control

- **Plant-specific watering (drip irrigation) robs weeds of water.**



# Cultural Control

- **Prevent weeds by not using manures that may contain weed seeds.**





# Mechanical Controls

- **Hand-weeding—the best weed control in many situations.**



# Mechanical Controls

- **String trimmers and mowers help control some kinds of weeds.**



# **Mechanical Controls**

- **Tilling – works with some weeds prior to planting but never till rhizomatous or stoloniferous weeds as that spreads them.**

# Solar treatment

- **Prior to planting, place clear plastic over weedy area through heat of the summer. This pasteurizes the soil, killing many annual weeds and weed seeds.**



# Chemical Control of Weeds

- Use chemicals only if other methods won't work.



# Chemical Control of Weeds

- **Plant-killing chemicals are poisons. Use with care and treat them with respect.**



# Chemical Control of Weeds

- **Always read and follow label directions. The labels on these chemicals are legal documents.**

# Non-selective Herbicides

- Name brand includes Round-Up. Contains glyphosate or other non-selective chemicals.





# Non-selective Herbicides

- **Will kill all plants—be very careful of drips, stray spray droplets. Protect beneficial plants with milk jugs, boxes or other devices.**



# **Non-selective Herbicides**

- **Do not use on windy days. Mornings usually calmer.**
- **Chemical is rendered ineffective when it hits the soil.**
- **You can wear cotton gloves OVER rubber gloves, dip in herbicide and hand-rub weeds for spot treatment.**

# Broadleaf Weed Killers

- **These chemicals will kill broadleaf weeds, but not grasses.**



# Broadleaf Weed Killers

- Typical products are Weed-Be-Gone, 2-4-D, Weed N Feed, etc.



# Broadleaf Weed Killers

- **Do not use when the temperatures are above 85 degrees, as they vaporize and harm desirable plants.**



# Broadleaf Weed Killers

**Do not use these products around grapes, tomatoes or other sensitive plants.**





# **Pre-Emergent Herbicides**

- **Some chemicals are short lived, others last all season and some last several seasons so do not use them where you want to seed grass.**



# **IPM Management of Weeds in Turf**

- **Mowing**
- **Irrigation**
- **Fertilization**
- **Seed and Sod Selection**
- **Traffic Management**

# Weed Control in the Lawn

- **A healthy lawn is the best weed control. Grass will crowd/shade out most lawn weeds.**



# Weed Control in the Lawn

- **Mow lawn 2.5-3 inches high. Taller grass shades the soil, blocks light and prevents germination of many weed seeds.**



# Weed Control in the Lawn

- **Regular mowing helps control some weeds.**



# Weed Control in the Lawn

- **Water deeply and infrequently. Some weeds thrive with excess water.**



# Weed Control in the Lawn

- **Apply adequate water to keep grass from going dormant grass and allowing weeds to grow.**



# **Weed Control in the Lawn**

- **Hand-pull weeds after soaking soil if possible, cutting roots off 2-4" below crown.**

# Weed Control in the Lawn

- **Patch bare spots if needed with matching sod from another area of the lawn or with the same seed.**





# **Weed Control in the Lawn**

- **If seeding lawn, choose seed mix that contains no undesirable grass seed.**

# Weed Control in the Lawn

- **Post-emergent lawn weed killers (2-4-D, Weed-be-Gone), are designed to kill broadleaf plants, but not grass.**



# Weed Control in the Lawn

- *Do not use when temperatures are higher than 85 degrees or in wind.*

# Fertilization

- **Fertilization during the growing season strengthens the ability of the grass to compete with weeds**
- **Light frequent fertilization encourages the growth of the grass and enables it to out compete the weeds**

# Watering

- **Avoid overwatering or underwatering**
- **If grass goes dormant in mid summer from lack of water, some deep rooted perennials will appear**
- **Overwatered grass is invaded by barnyard grass annual bluegrass and other weeds**

# Seed and Sod

- **Use weed free seed when planting**
- **Check the label for undesirable grass species**
- **Commercial sod is treated and inspected to reduce weeds**

# **Mechanical Control**

- **Cut 2-4 inches below the crown on most weeds**
- **Pull out most species after deep watering**
- **Undercut around small grass patches with a spade**
- **Cut a matching replacement piece from an inconspicuous part of the lawn**

# **Preemergence Weed Control**

- **Prevent germination**
- **Work best on annuals**
- **Have little effect on emerged seedlings**



# **Postemergence Chemical Control**

- **Growth regulators**
- **Distort growth and rupture cells**
- **Impair food movement causing death**

# **Liquid Applications**

## **Gravity Flow**

- **Sprinkler Nozzle**
  - Fits on gallon jug
- **Cane Tube**
  - Dispenser that releases right on weed
- **Liquid Spreader**
  - Like granular applicators
- **Brush and Can**

# Liquid Application Pressure Systems

- **Water Pressure or Hose End Sprayer**
  - **Difficult to control**
- **Air Pressure Sprayer**
  - **Never use when wind speed is above 5 mph**