

# *Identifying & Managing Weeds in Gardens*



**Todd Mervosh**

Valley Laboratory - Windsor

The Connecticut Agricultural Experiment Station



# Definitions of WEED

- ‘Plant out of Place’ - any plant growing where it is not wanted.
- Plant with generally undesirable properties.
- Plant that spreads rapidly and competitively.
- “Plant that has mastered every survival skill except for learning how to grow in rows.”

*Doug Larson*

- “A plant whose virtues have not yet been discovered.” *Ralph Waldo Emerson*

*“Is this a wildflower or a weed?”*



# *Field Violet / Field Pansy (Viola arvensis)*



**Beetle Bailey / By MORT WALKER**



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# **WEEDS: NEGATIVES**

- 1) Compete with crops / desirable plants for:
  - **WATER, NUTRIENTS, SPACE, LIGHT****
- 2) Reduce air flow in garden, keeping plants wetter & more prone to pathogens.**
- 3) Can be alternate hosts for fungal diseases, or harbor insect pests.**
- 4) Health Problems:  
Hay fever (ragweed), skin rashes (poison ivy).**
- 5) Unattractive: Detract from beauty of garden or landscape planting.**



# **WEEDS: POSITIVES**

- 1) Help protect soil from erosion.**
- 2) Legumes (clovers, vetch) release nitrogen from root nodules into soil – add fertilizer.**
- 3) Some weeds harbor beneficial insects.**
- 4) Food sources for many animals.**
- 5) Many weeds are edible for humans (purslane, lambsquarters, dandelion, etc.)**
- 6) Some “weeds” are beautiful!**



# Photo Credits

- Randy Prostak, Univ. of Massachusetts, UMass Extension
- Weed Science Society of America website ([www.wssa.net](http://www.wssa.net))
- Todd Mervosh



# **Weeds with Annual Life Cycle**

- Winter Annuals**
- Summer Annuals**





# ANNUAL BLUEGRASS (*Poa annua*)



# COMMON CHICKWEED (*Stellaria media*)



# HORSEWEED / MARESTAIL (*Conyza canadensis*)



# LARGE CRABGRASS (*Digitaria sanguinalis*)



# FALL PANICUM (*Panicum dichotomiflorum*)



# YELLOW FOXTAIL (*Setaria glauca*)

Giant Foxtail  
(*S. faberi*)



# COMMON PURSLANE (*Portulaca oleracea*)



# LAMBSQUARTERS (*Chenopodium album*)





# REDROOT PIGWEED (*Amaranthus retroflexus*)



# HAIRY GALINSOGA (*Galinsoga ciliata*)



# COMMON RAGWEED (*Ambrosia artemisiifolia*)



# SPOTTED SPURGE (*Euphorbia maculata*)



# E. BLACK NIGHTSHADE (*Solanum ptycanthum*)



# VELVETLEAF (*Abutilon theophrasti*)



# Weeds with Biennial Life Cycle



# QUEEN ANNE'S LACE / WILD CARROT (*Daucus carota*)





# BULL THISTLE (*Cirsium vulgare*)



# **Weeds with Perennial Life Cycle**

- Simple Perennials**
- Spreading Perennials**



# COMMON DANDELION (*Taraxacum officinale*)



# QUACKGRASS (*Erythrigia repens*)



# YELLOW NUTSEDGE (*Cyperus esculentus*)



# GROUND-IVY / CREEPING CHARLIE (*Glechoma hederacea*)



# MUGWORT (*Artemisia vulgaris*)



# FIELD HORSETAIL (*Equisetum arvense*)





# Weed Management Principles

- Prevention / Sanitation
  - Avoid input of weed seeds or perennial propagules into garden: use weed-free mulch and compost.
  - If possible, control perennial weeds before planting & before patches begin to spread.
  - Remove weeds when small, before seeds begin to form.
  - Try not to water or fertilize the weeds!
  - Mulch: Use effectively!



# Weed Management in Gardens

- Hoes & other weed removal tools:
  - Keep blades sharp.
  - Don't disturb soil too deeply (brings buried weed seeds close to surface, stimulates germination).
  - Weed seedlings: Cut by scraping hoe blade just slightly below soil surface.
  - Have to dig deeper to remove perennial weeds.
  - Remove weeds from garden that can re-root after being cut (especially purslane).



# Weed Management in Gardens

- Herbicides:
  - Very few herbicides are registered for use in home gardens (especially for edible crops).
  - Before using any herbicide, read the product label instructions, and follow all directions carefully. Don't exceed recommended doses of chemical.  
**(The Label is the Law!)**
  - If herbicides are used to control weeds in lawn, do not use grass clippings as mulch in garden. Also, do not add grass or leaves from herbicide-treated lawn to compost pile if to be used in garden.



# Weed Management in Gardens

- Pre-emergence Herbicides:
  - Prevent germinating weed seeds.
  - Do not control existing weeds, or re-sprouting perennial weeds.
  - Organic option: Corn Gluten Meal
    - Suppresses crabgrass & some other weeds.
    - Contains ~10% nitrogen
  - Trifluralin granules ('Preen', 'Garden Weed Preventer', etc.)
    - Check label for list of tolerant vegetables & ornamentals.
    - Prevents annual grasses & many broadleaf weeds.



# Weed Management in Gardens

- Post-emergence Herbicides:
  - Few options; Directed sprays only.
  - Organic options: Vinegar (acetic acid), Fatty acid solutions, Clove oil sprays
    - Contact herbicides (kill annual weeds, but only the topgrowth of established perennial weeds).
  - Glyphosate ('Roundup' or equivalent product) or Glufosinate ('Finale' or equivalent)
    - Not recommended for use in vegetable gardens.
    - Non-selective / Systemic herbicides (will kill or injure nearly all plants via foliar uptake). *Must be careful!!!.*
    - No residual activity in soil.





Poison ivy



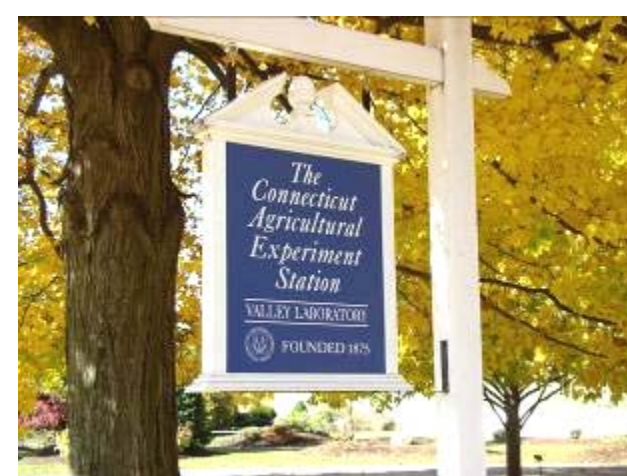
Poison sumac



Poison oak

# POISON-IVY (*Toxicodendron radicans*)





**Todd Mervosh**  
CAES Valley Laboratory  
153 Cook Hill Road  
P.O. Box 248  
Windsor, CT 06095

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Phone: 860-683-4984  
Email: [Todd.Mervosh@ct.gov](mailto:Todd.Mervosh@ct.gov)  
Website: [www.ct.gov/caes](http://www.ct.gov/caes)

