

# Challenges of managing weeds in perennial production

- Weeds
- Multi-species nature of perennial production
- Herbaceous aspects of the plants
- Finding appropriate management options



# Weeds

- A few weed species are major problems
  - Hard to control propagules
    - Move by air
      - Groundsel
      - Willowherb
      - Horseweed
      - Dandelion



# Weeds

- A few weed species are major problems
  - Hard to control propagules
- **Seed-poppers**
  - Bittercress
  - Oxalis (woodsorrel)



# Weeds

- A few weed species are major problems
  - Hard to control propagules
    - Movement by water
      - Chickweed
      - Pearlwort
      - Liverwort



QuickTime™ and a  
Photo - JPEG decompressor  
are needed to see this picture.

# Weeds

- Scout

- Identify what you have regularly
- Find infestations of new weeds early
- Inspect new plant material



Rust Disease caused  
by  
*Puccinia lagenophorae*



# Weeds

- Keep surrounding areas weed free
- Regular hand weeding is key
  - Even when it hurts !!!



# Multi species production

- Grow “like with like”
  - Good competitors with each other
- Segregate “problem children”
- The allure of the new and exotic:  
Are you growing your next weed problem as a crop?





# Multi species production

- Segregate the “weed suspects”
- What to look for and think about:
  - Where did come from:
    - Recently (how long in the area or country)
    - Originally (Asia vs. native of nearby area)
    - How does it propagate itself?
      - Excessive seed production
      - Small seed
      - Windborne seed
      - Underground seed
      - Rhizomes
    - Some families are not to be trusted
      - Like Umbelliferae and Composites

# Multi species production

- Weed populations change when perennials growth requirements change:
  - Solar radiation
    - Full sun vs shade house
  - Irrigation
  - Fertility
  - pH
  - Growing media composition and origin

# The Herbaceous nature of the crop

- Commonly grown perennials differ in:
  - Habit
  - Leaf texture
  - Leaf succulence
  - Spreading ability
  - Stem numbers/pot
  - Deciduousness



# Finding appropriate management options

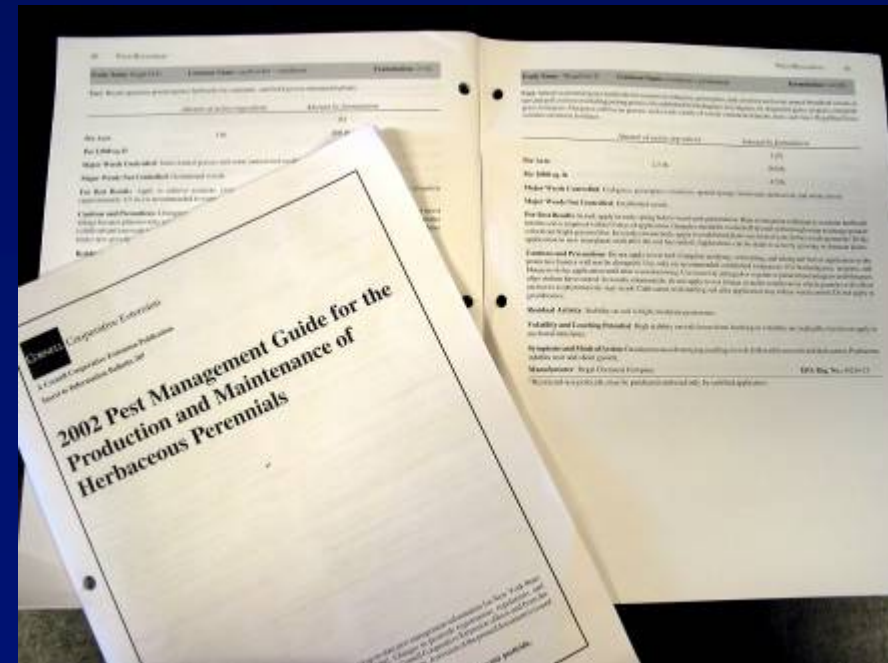
- Cultural options include:
  - Optimizing production cycle for minimal time in the nursery
  - Handweeding regularly
  - Organic mulches or topdressings
  - Synthetic disks or other mulches



# What are the herbicide options?

Finding out what's available, safe and effective

- Other growers
- University publications and websites
- Extension specialists/agents
- Company tech/sales reps



# What are the herbicide options?

- What to avoid always:
  - Several materials used on woody plants
    - Casoron
    - Princep
    - Sureguard
    - Broadstar
    - Goal 2XL
    - Ronstar WSP

# What are the herbicide options?

- What to avoid probably:
- A few species are labeled:
- Worth checking the reference/label for more information:
  - Ronstar G
  - Combinations with granular oxyfluorfen
    - Rout, OH2, Regal O-O





# What are the herbicide options?

- These have several perennials on the label, but still might be problematic:
  - Sprayable forms of DNAs and similar pre-emergence
    - Oryzalin (Surflan 4AS)
    - Prodiamine (Barricade 4FL)
    - Pendimethalin (Pendulum3.3EC and others)
    - Dithiopyr (Dimension EC)
    - S-metolachlor (Pennant Magnum 7.8EC)
    - Isoxaben (Gallery 75 DF)



# What are the herbicide options?

- These have several to many perennials labeled, and can be applied with caution.
  - Granular forms of DNAs and similar pre-emergence
    - Trifluralin (Treflan 4G/Preen)
    - Prodiamine (Regalkade)
    - Pendimethalin (Pendulum 2G)
    - Napropamide (Devrinol 2G)
    - Combinations with isoxaben
      - Snapshot, PreenPlus, others?
    - Terracyte (for liverwort and moss control)

# *What are the herbicide options?*

- These have several to many perennials labeled, and can be applied with caution:
- Postemergence grass killers
  - Clethodim (Envoy will control annual bluegrass)
  - Sethoxydim (Vantage)
  - Fluazifop-p (Fusillade)
  - Fenoxaprop (AcclaimExtra)



# What are the herbicide options?

- Others that can be used around the nursery for clean up.
- Postemergence herbicides
  - Glyphosate (RoundupPro and others)
  - Glufosinate (Finale)
  - Pelargonic acid (Scythe)
  - Diquat (Reward)

# What are the herbicide options?

- New Developments: soon to be here ???
  - Mogeton for liverwort control
  - Other granular products:
    - alone or in combinations
  - Postemergence broadleaf herbicides for weed control in ornamental grasses

- Liverwort Control with MOGETON



Terracyte  
New formulation

Mogeton  
25 WP

untreated

# Trimec applied to dormant grasses for winter annual weed control



# Strategies for evaluating new ideas

- Utilize dormant season if possible.
- Keep good records/digital photos of trials
  - Application timing
  - State of plants at time of application
  - Irrigation after planting
  - Apply materials to foliage for worst case scenerio
  - Apply 1X and 2X at least.