Ground Covers for Weed Control

Gail Langellotto, Ph.D.
OSU Horticulture
Extension Master Gardener Program

Outline

• Defining ‘weeds’
• Groundcovers as a weed control strategy
• Groundcovers to consider
• Groundcovers to avoid

What is a weed?

• A plant that is growing where you don’t want it to grow.
• Directly or indirectly reduces the growth and quality of desired plants
  – Compete for water, nutrients and light
  – Produce chemicals that stunt growth
  – Support secondary pests
• Aesthetically objectionable

PDF Version of Slides

• extension.oregonstate.edu/mg
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  – Left-Hand Link

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Components of a Weed Control Program
- Prior to planting
  - Eliminate weeds in the target area
- Once a planting is in place
  - Prevent weed growth in the target area
  - Eliminate weeds as they appear

**Prevention is easier and cheaper than Elimination**

Weed Control Methods
- Physical
  - Cultivation
  - Mowing
  - Mulching
  - Hand-pulling
  - Groundcovers
- Chemical
- Biological
  - For a few weed species

Weed control with ground covers
- Eliminate Existing Weeds Before Planting

- Chemical Elimination
  - Non-selective herbicide 1-2 times prior to planting
    - Wait for dieback prior to planting
  - Corn meal gluten as a pre-emergent herbicide
- Non-Chemical Elimination
  - Hoe or pull weeds
  - Solarization
Weed Control with Groundcovers

- **Planting Groundcovers**
  - Consider plant growth rate and habit when determining planting space
    - No competition between plants
    - Spaced so that bare ground will be filled
  - Use proper planting techniques
    - Wide holes
    - Backfilled (with compost) mixed in with soil

- **Fertilizing**
  - Most groundcovers have moderate fertilizer needs
  - Fertilize in the spring or fall, when growth most active
    - Slow release fertilizer at the base of the plant
    - Broadcast 10-10-10 granular (1 lb / 100 ft²)

- **Mulching**
  - 2" layer of mulch will retain moisture, prevent weed growth and regulate soil temperature
  - Fine-textured, well composted mulch is preferred
    - Composted sawdust, fir bark, ground bark, shredded tree leaves
  - Keep mulch from directly touching plant base to prevent disease

- **Watering**
  - Water individual plants until established (through til seasonal rains)
  - Many established groundcovers are drought tolerant or drought resistant, or at least don’t require water as often as other plantings

Pedee School Project

- Clay soil (free of rock and impediment)
- No on-site irrigation available
  - Transplanted in October 2006 (fall rain)
- Cistus, Ceanothus, Rosemary, Lavender
  - Genuinely drought tolerant plants
- No maintenance
  - No fertilizer
  - No pruning
  - No water
- Mulched with bark

October 2006
Case Study: Oregon Garden Lots

- Two rectangular plots adjacent to paved parking lots
- Landscaping funded by SPROUT (Sustainable Plant Research and Outreach Center)
- One half of each rectangular lot will receive minimal irrigation in the summer
- Other half of each plot will receive no irrigation

Sites / Research Plots

- Graded in October 2006 with heavy equipment
- Rocks hand collected and placed in ditch to form dry riverbeds
- Irrigation via a single pipe down the center of each bed, with pop-up overhead risers
  - Half capped off in the summer of 2008

Oregon Garden Project

- Planting in May 2007 by Master Gardeners and City of Silverton employees
- Hand watered and fertilized
  - Fertilization to ensure uniformity of N to plants
- Weed control
  - Pre-emergent herbicide
  - 3” of Douglas Fir mulch
  - Hand weeding
- Irrigation during the summer of 2007

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What is a Groundcover?

- (ornamental) plants that are used to develop masses of plant material in the landscape
  - Color
  - Erosion control
  - Filler
  - Weed control
  - Most are perennial, and woody or semi-woody

Notes on Groundcovers

- Waterwise: included in OSU Waterwise list of garden plants that are drought tolerant or resistant
- Gardensmart Oregon: included in Gardensmart list of alternatives to garden plants on ODA noxious weed list
Kinnickinnick
*Arctostaphylos uva-ursi*
- Low growing shrub
- Partial shade to full sun
- Prefers coarse, well-drained soils over moist sites
- Gardensmart Plant (Native alternative to English Ivy)
- Waterwise Plant

Coastal or Sand Strawberry
*Fragaria chiloensis*
- Full sun
- Well-drained, sandy soils
- Gardenwise Plant (Native alternative to English Ivy)
- Height = 15cm
- Spread → Indefinite
- Useful on slopes

Woodland Strawberry
*Fragaria vesca*
- Partial shade to full sun
- Well-drained to moist soils
- Native Alternative to English Ivy
- Height = 20cm
- Spread → Indefinite

Boston Ivy
*Parthenocissus tricuspidata*
- Woody vine (up to 50' in length)
- Light shade to full sun
- Slightly dry to slightly moist soils
- Gardensmart Plant (Ornamental alternative to English Ivy)

Oregon Oxalis
*Oxalis oregana*
- Shade to partial shade
- Moist soils
- Gardensmart Plant (Native alternative to English Ivy)
- Spread by rhizomes

Point Reyes ceanothus
*Ceanothus gloriosus var. Point Reyes*
- Broadleaf Evergreen
- Sun
- Relatively short-lived (5-10 years)
- Waterwise Plant
- Gardensmart Plant (alternative to English Ivy)
**Dwarf Periwinkle**  
*Vinca minor*
- Evergreen, Perennial
- medium growth rate
- partial sun to full shade (not tolerant of full sun)
- Can grow beyond its intended boundaries if not tended

**Creeping Mahonia**  
*Mahonia repens*
- Evergreen shrub/ground cover
- Sun to partial shade.
- Native range includes parts of Oregon

**Hens and Chicks**  
*Sempervivum spp.*
- Mat-forming succulent
- Partial shade to full sun
- Well drained soil
- Waterwise Plant

**Juniperus horizontalis**  
*Creeping Juniper*
- Conifer, evergreen,
- Forms large mats (18" by 10")
- Waterwise plant
- Gardensmart plant
- Full Sun
- Tolerant of heavy soils
- Many cultivars

**Iberis sempervirens**  
*Evergreen Candytuft*
- Evergreen ground cover, 15-30 cm, sprawling.
- White, racemous flowers
- Blooms in spring to early summer
- Full Sun
- Native to southern Europe.
- Several cultivars

**Gaultheria procumbens**  
*American Wintergreen*
- Evergreen shrublet
- Height =6 inches"
- Slow growth
- Leaves simple, dark green, glossy above.
- Flowers urn-shaped, white or pinkish, single or rarely in small racemes.
- Fruits very aromatic when rubbed, persistent from October to late spring.
- Sun or part shade, acid soils, slow growing
Bunchberry
*Cornus canadensis*
- Deciduous
- 7.5-23 cm high, may form a mat.
- Partial or full shade.
- Requires moist soil that is high in organic matter and frequent watering until well established.

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Groundcovers on ODA Noxious Weed List
- English Ivy (*Hedera helix*)
- Traveller’s Joy (*Clematis vitalba*)

Groundcovers that may aggressively grow beyond boundaries
- Bishop’s Weed
  - *Aegopodium podagraria*
- Snow-in-summer
  - *Cerastium tomentosum*
- Creeping Jenny
  - *Lysimachia nummularia*
- Creeping Speedwell
  - *Veronica repens*
- Wintercreeper
  - *Euonymus fortunei*

Euonymus fortunei
Wintercreeper Euonymus
- Broadleaf evergreen vine or mounding, trailing shrub
- A variable species because it mutates readily and forms a wide range of leaf types.
- Sun to part shade.
- Prefers a light, well-drained soil, but tolerant of moisture and most soil types.
- Easy to grow.
- Has invasive tendencies.
Euonymus fortunei
‘Emerald Gaiety’

Euonymus fortunei
Kewensis

Euonymus fortunei
Moon Shadow

Preventing Groundcovers from becoming Invasive

• Some groundcovers can be more problematic than others, so pick your plant carefully.

• Favor groundcovers that spread by root and not by seed.

• Keep a check on the groundcover each year
  – Weed out any areas that are getting too large and encroaching on other plants or areas

Groundcovers for Weed Control

• Establishment and spread of planting

• Maintenance and weed removal

• Aesthetic and functional

• Many species and varieties to choose from, for a variety of site characteristics

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References & Resources

• “Water-Efficient Plants of the Willamette Valley”.
  – $5.00 at local Extension offices
  – Online at: http://extension.oregonstate.edu/catalog/abstract.php?series_no=MSC+1

• Plant List:
  – http://extension.oregonstate.edu/yamhill/sites/default/files/Final_WaterWise_Plant_List-OSU.pdf

References & Resources

• “Gardensmart Oregon: a guide to non-invasive plants”.
  – Free at local Extension offices


• Yamhill County Extension Site:
  – Extension.oregonstate.edu/yamhill
  – Click on ‘Eco-Gardening’ left-hand link