Landscape Weed Management

Goals

- Primarily aesthetic: improving the visual appearance of the landscape
- Functional: safety, allergies, insect and disease control

What Else Do Weeds Do?

- Cause allergies
- Harm people
- Harbor insects and plant pathogens

Principles of Landscape Weed Management – a 5-step planning process

1. Site Assessment
2. Define the Planting:
   - 5 Types of Landscape Plantings
3. Selection of ornamental species and compatible weed management options
4. Site Preparation
5. Implementation

Step 1. Site assessment

- Key weeds – perennial broadleaves and sedges
- Grass weeds can be controlled POST with selective herbicides
Perennial Broadleaves and Sedges are most difficult to control after planting

Grasses are easier to control

Step 1. Site assessment
• Key weeds – perennial broadleaves and sedges
• Grass weeds can be controlled POST with selective herbicides
• Ask yourself the question:

“Can I control these weeds after Planting?”

Step 2. Define the Planting:
• 5 Types of Landscape Plantings
  – The type of planting will define the post-plant weed management options and the importance of pre-plant weed control.
  ❖ Woody Tree and Shrub beds
  ❖ Woody groundcover beds
  ❖ Annual beds
  ❖ Perennial beds
  ❖ Mixed Plantings

Woody Tree and Shrubbery Beds

Table 1. Weed management options and limitations for the 5 types of landscape plantings.

Tree and Shrub Beds: Densely shaded plantings exclude weeds.
• But, such beds are often open allowing weeds to grow
• Geotextiles and mulches are useful.
• Many PRE & POST herbicides
• Spot or directed applications of non-selective herbicides
• Therefore: species selection is flexible and pre-plant weed control is not as critical.
What weed control can you do here, That you cannot do here?

Table 1. Weed management options and limitations for the 5 types of landscape plantings.

**Woody Ground Cover Beds:** The ground cover should ultimately exclude most weeds
- Limited uses for non-selective herbicides;
- Control perennial weeds before planting
- Do not use geotextiles where ground covers are expected to root and spread.
- Control annual weeds with mulching, hand weeding, and/or PRE herbicides.
- Several PRE herbicides are available.
- Few uses for POST herbicides
- POST control of annual and perennial grasses is possible.

**Annual Flower Beds:** A closed canopy will shade-out many weeds.
- Periodic cultivation (annually or between display rotations) will suppress many weeds.
- Very limited use of non-selective herbicides; control perennial weeds before planting.
- Geotextiles generally are not useful (due to the short-term nature of the planting)
- Few PRE herbicides are safe; careful species and product selection are required.
- Mulches will suppress many annual weeds – but too much mulch is a problem to manage.
Table 1. Weed management options and limitations for the 5 types of landscape plantings.

**Herbaceous Perennial Beds:** Similar to Annual Flower Beds except:
- Lack of periodic cultivation will encourage perennial weed encroachment.
- Fewer herbicides are labeled; check the labels carefully.
- Geotextiles may useful in clump-type plantings or to restrict growth of spreading-types.
- Very limited use of non-selective or postemergence herbicides.

Step 3. Selection of ornamental species and compatible weed management options.

- At the design phase: selecting ornamental plants with weed control in mind.
- Example 1: Florida betony cannot be selectively controlled in beds planted to herbaceous ornamentals. Therefore, opting for a woody planting instead will make maintenance easier by allowing the use of effective herbicides.

Step 3. Selection of ornamental species and compatible weed management options.

- Example 2: Yellow nutsedge can be controlled with preemergence applications of Pennant Magnum in Ageratum or Petunia beds but not in Begonia or Coleus. If yellow nutsedge has been a problem in the past – plant petunias instead of coleus.

Step 3. Selection of ornamental species and compatible weed management options.

- Example 3: Dodder cannot be controlled in petunia or snapdragons but scaevola and sweet potato are resistant.

Step 4: Site Preparation

- Goal: eliminate weeds that cannot be controlled after planting
- Options:
  - Cultivation
  - Non-selective herbicides
  - Fumigation (option of last resort)
  - Solarization
Step 5: Installation and Implementation

- Site preparation
- Sanitation
- Mulches
- Preemergence Herbicides
- Postemergence Herbicides

Study Questions Lecture 1

1. What are the 5 types of landscape plantings? List in order from the most to fewest post-plant weed control options.
2. Give an example of how landscape plant selection can influence your weed management choices.
3. What are the key weed management option differences between the 5 landscape bed types?
4. Following a site assessment -- What is the key question you ask yourself (and answer) concerning the weeds present in a proposed landscape planting?