Master Gardener Program

Master Gardener program volunteers are trained by the University of California Cooperative Extension. Our mission is to develop, adapt and extend research-based horticultural information and educational programs to the residents of Santa Clara County.

Master Gardener Help Desk

- E-mail questions using our website: http://mgsantaclara.ucanr.edu/contact-us/ask-a-gardening-question/
- Call: 408-282-3105 (9:30 a.m. – 12:30 p.m. Monday through Friday)
- Bring specimens during Help Desk hours: 1553 Berger Drive, Building 1, 2nd Floor, San Jose. Please call before coming.
- Call or bring specimens to the Master Gardeners at the Gamble Garden library in Palo Alto: 650-329-1356 Fridays only, 1-4 p.m. Please call before coming.

Why use IPM - Integrated Pest Management?

- Interdependency: Everything is connected - Web of Life (Air, Water, and Soil)
- Provides long-term solutions
- Manages potential problems before they get out of hand
- Eliminates unnecessary herbicide use
- Good for health and the environment
- Gives you choices that rarely require herbicides

What is a weed (Pest)?

- A weed by any other name…
- Any plant you don’t want is a weed

Annuals & Perennial Weeds:

- Annuals grow each year from seed = control needs to focus on preventing NEW seeds from production (Stop the weed to seed cycle)
- Germination of seeds ALREADY in soil.
- Perennials re-grow from rootstock & often rhizomes, bulbs or nutlets
Warning from Weeds to You:
• Controlling us is an ongoing gardening activity (pencil us in on your calendar)
• A single weed produces 223,200 to 250 seeds per plant each season
• We have uneven germination of our seeds = we will not ALL germinate when conditions are favorable (some will remain dormant until the NEXT season).

IPM Tools & Techniques
• Combine practices for long-term management
• Prevention
• Cultural Methods
• Physical or Mechanical Methods
• Biological Methods
• Lastly - Pesticide Use

IPM for Weeds:
• Pull, Remove, Destroy Weeds (Stop the seed cycle)
• Do not import weed seeds (unknown soil sources)
• Plant densely to suppress weeds
• Use mulch to suppress and prevent weed growth.
• Water appropriately
• Select competitive plants

Cultural Methods
• For Veggie Gardens
  - Promote vigorous growth, use plants suited to your area
  - Use transplants to give plants a head start
  - Plant veggies closely to form ‘living mulch’ to exclude light from weeds
  - Water only where needed
  - Disturb soil as little as possible to avoid bringing new seeds to the surface.

Cultural Methods: Mulch
• Organic or non-organic?
• Compost as mulch
• Types of mulch:
  - Fir bark, shredded redwood, recycled bark, playground fiber, arbor mulch, etc.
  - Choose mulch according to preference, texture, size & purpose.

Mechanical Methods
• Hoe or pull sprouting weeds
• Flame or mow plants before flowering
• No seed production allowed
• Sheet Mulching

**Chemical Control**
• Chemical control using herbicides
• Pre-emergent herbicides prevent seed germination
• Post-emergent herbicides kill weeds by contact or absorption into plant tissues

**What materials are best?**
• Least Toxic
• Pest Specific
• Apply to reduce exposure

**When are Herbicides needed?**
• When damage is intolerable
• Other methods are ineffective

**IF you use Herbicides:**
• Choose the least toxic effective material
• Use in combination with other IPM methods (Cultural, Biological & Mechanical)
• Follow instructions on labels very carefully!
• Consult UC IPM Pest Notes

**Examples:**

1. Purslane - *Portulaca oleracea* (Summer annual broadleaf)
2. Burclover - *Medicago polymorpha* (annual broadleaf)
3. Cheeseweed (Mallow) - *Malva parviflora* (Winter annual broadleaf)
4. Fillaree - *Erodium spp.* (Winter annual & sometimes Bienniel)
5. Crabgrass - *Digitaria spp.* (annual grass)
6. Bluegrass - *Poa annua* (Winter annual grass)
7. Dandelion - *Taraxacum officinale* (simple perennial)
8. Bermudagrass - *Cynodon dactylon* (creeping perennial)

9. Bermuda Buttercup - *Oxalis pes-caprae* (bulbing perennial)

10. Wood Sorrel - *Oxalis corniculata* (creeping perennial)

11. Nutsedge - *Cyperus spp.* (bulbing perennial)

12. Burning Nettle - *Urtica urens* (annual broadleaf)

   Stinging Nettle - *Urtica dioica* (annual broadleaf)

13. Scarlet Pimpernel - *Anagallis arvensis* (Winter or Summer annual)

14. Puncturevine - *Tribulus terrestris* (Summer annual)

15. Field Bindweed - *Convolvulus arvensis* (perennial broadleaf)

**Resources and references**

- Santa Clara Master Gardeners: [http://mgsantaclara.ucanr.edu](http://mgsantaclara.ucanr.edu)
- University of California Integrated Pest Management (UC IPM) [http://www.ipm.ucdavis.edu](http://www.ipm.ucdavis.edu)