**Pesticide Free Gardening Practices**

The use of pesticides in garden settings is a personal choice. Understandably people have varying views and degrees of tolerance for weeds, garden diseases, and pest insects. Organic gardeners choose not to use pesticides in their gardens.

Consider the following garden practices that can encourage a pollinator friendly and healthy landscape.

A well-known holistic approach to managing an outdoor landscape is to use IPM and PHC. Integrated Pest Management (IPM) and Plant Health Care (PHC) are both catch all phrases for the common-sense action plans to handle pest insects, diseases, and cultural issues (soil, watering, mulch, etc.).

The goal is to address these issues economically and with safety in mind for you, your pets, pollinators, birds and respect for the environment.

* Carefully give a twice-over look for insects and disease when purchasing or sharing plants. In other words, try to prevent future issues.
* Choose the right plants for your landscapes—avoid planting a problem. Look for fruit tree cultivars that are resistant to fire blight disease or street trees less prone to limb breakage. Aspen trees are great choices for higher elevation gardening, but they are not an ideal choice for urban settings. They prefer growing in their natural mountain setting with lighter, more acidic soils. Expect them to have a shorter city life expectancy and be prone to leaf spots, canker and scale insects.
* Consider choosing new plants for the landscape that are not so attractive to Japanese beetles which emerge from turf grass in June to early July.

Reduce cool season turf areas in landscapes where Japanese beetles prefer to lay eggs (next summer’s generation of adult beetles). If reducing turf isn’t an option, keep turf grass taller (above 3 inches) in the summer to discourage egg laying. Higher grass has more root mass that can tolerate root damage from chewing grubs. A short lawn with less root mass is more susceptible to grub damage. Hand removal of adult Japanese beetles and drowning in soapy water can be tedious, but regular removal keeps numbers down. Beetle traps are effective, but decades of scientific research prove that traps attract more Japanese beetles to surrounding plants.

* Plant plants that attract pollinators and other wildlife you wish to encourage. Include plants that pollinators and other beneficial insects need for their sustenance and egg laying. See the resources for more information.
* Scouting means regularly (often daily) physically inspecting your plants and checking to see what is happening in your garden. Look for chewed or distorted leaves, loss of plant vigor, or color changes. If a plant doesn’t look right take a closer look.
* Use the least disruptive measures for control of pests. In many cases with pest insects, the cavalry of beneficial insects will show up soon to take care of the problem. For example—lady beetles (also known as ladybugs) love to munch on aphids, but they won’t arrive to dine unless the aphid table is set. Be patient—give your garden time for the beneficial predator insects to arrive. Also, hosing the aphids or spider mites off with water is fast and effective.
* Try to identify whether an insect is a beneficial or destructive one. If you don’t know, snip some leaves with eggs (commonly found on leaf undersides) or adults (if catchable) and place in a clean, zipped baggy or paper sack. Bring them to your knowledgeable Colorado Garden Center or your county Colorado State University extension office for correct identification. They can recommend management options.

**Weeds in the Landscape**

* Weeds are annoying.
* Annual weeds live one year—letting them go to seed ensures their return next year. These include crabgrass, purslane, knotweed and common chickweed.
* Perennial weeds come back every year, and without removal they can easily take the focus off your flower blooms. They also return year after year if not removed. Common ones include dandelions, bindweed, Canada thistle, mallow and broadleaf plantain.
* Exceptions are the culinary weeds which include dandelions, purslane and lamb’s quarter, which happen to be delightfully edible when young and not sprayed with herbicides.
* Weeds can host pest insects like thrips or leafhoppers which are known for carrying diseases that can infect tomatoes and several ornamental plants like purple coneflower, asters, mums and cosmos.
* Hand dig and regularly remove weeds.
* Any exposed or disturbed soil or bare ground in the landscape is an invitation for weed growth. Plant open areas with shrubs or perennials (well mulched) or add hardscape features like walkways or a patio.
* Work on growing and maintaining a healthy lawn. A few lawn weeds are okay. Hand dig unwanted lawn weeds for immediate removal and satisfaction.
* Stronger horticultural vinegars and organic weed products containing botanical oils are an option. Try boiling water over weeds in tight spaces. Repeated application may be required for tougher weeds. Use care not to accidently spray vinegar or botanical oils on neighboring plants which will harm them too.
* Battle bindweed even if it may take years, you’ll eventually tire bindweed to death with consistent removal. Hand pull or cut, just keep at it.
* Weed fabric use is common in landscapes. Weeds eventually grow on top of the barrier and then find their way below and through the fabric. A 2-3 inch mulch layer works well on its own to keep weeds down and they are much easier to pull through mulch alone.
* Mulch is your friend; it suppresses weed growth and keeps soils cool, which also reduces watering needs.
* Many female trees including ash, honey locust and crabapple form seeds that sprout in lawns or just about anywhere, the worst offender being Siberian elm trees. These tenacious tree weeds grow in the most peculiar spots and generally go un-noticed until they are overgrown and hard to remove. Mowing will keep tree seeds from maturing. Rake and move around mulch where seeds are taking hold to dislodge.
* Suckers from aspen, sumac and other trees can become a nuisance in lawns. They take nutrients away from the main tree. Pull or cut them at any time they reappear during the growing season.
* Organic lawn fertilizers will help keep your lawn healthy and charged with the nutrients it needs. Ask your helpful Garden Center of Colorado for organic lawn fertilizer recommendations.

**Resources**

Attracting Birds

<https://planttalk.colostate.edu/topics/trees-shrubs-vines/1702-attracting-birds/>

Attracting Butterflies to the Garden

<https://extension.colostate.edu/topic-areas/insects/attracting-butterflies-to-the-garden-5-504-2/>

Attracting Native Bees to your Landscape

<https://extension.colostate.edu/topic-areas/insects/attracting-native-bees-landscape-5-615/>

Beneficial Insects and other Arthropods <https://extension.colostate.edu/topic-areas/insects/beneficial-insects-and-other-arthropods-5-550/>

Creating Pollinator Habitat

<https://extension.colostate.edu/topic-areas/insects/creating-pollinator-habitat-5-616/>

Pesticides: Natural Products

<https://planttalk.colostate.edu/topics/insects-diseases/1427-pesticides-natural-products/>

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