

SUSTAINING OUR RESOURCES FOR FUTURE GENERATIONS

By Marlys Bell,
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In recent conversations about gardening, someone said she used to have a great vegetable garden with beautiful tomatoes, peppers and more zucchini than she could eat. But recently, her garden produced less and less. Finally she realized that nutrients were depleted and the soil needed regular replenishment with amendments such as manure, compost and nitrogen. To sustain the soil, she needed to put in as much as was taken out by the plants. By taking this simple step, she moved from depleting natural resources to replenishing them, a practice consistent with sustainability concepts. It helps her get a better yield from her garden while returning life and productivity to the soil.

Sustainability is a broad, overarching concept that encompasses many other terms such as “living green”, permaculture, natural, bioregional, and ecological systems. Using and replacing the earth’s natural resources at a rate so that present needs can be met without sacrificing the needs of future generations is the goal of those interested in sustainability. Although sustainability is often applied to our stewardship of air, water, soil, wildlife, forests, fossil fuels, the priorities for Master Gardeners (MGs) are those targeted by the Division of Agriculture and Natural Resource (ANR) at UC Davis.

ANR describes sustainability as taking action today to ensure that California’s agricultural and natural resource systems are not used up, destroyed or contaminated and that they will be in as good or better condition for subsequent generations. All citizens can help protect vital natural resources by making relatively simple changes in their gardening and landscaping practices. The following priorities are targeted for special attention in Tuolumne County:

*To reduce fertilizer and pesticide pollutants. The Mother Lode’s topography makes everyone either upstream or downstream from someone’s water supply. Water runoff containing nitrogen and other contaminants is dangerous to humans, wildlife, fish and other aquatic life. In addition, nitrogen from fertilizers contributes to algae bloom and other nitrates kill plant and animal life in lakes and streams. The first step toward sustainability is reducing herbicide, pesticide and fertilizer use. If used at all, they need to be contained on the property.

Excessive use of chemical herbicides and pesticides destroy beneficial birds, insects and other critters creating an imbalance in the ecosystem. Using more organic methods, encouraging natural enemies to control an overabundance of serious pests, and resorting to dangerous chemicals as a last resort support nature’s natural systems.

*To protect water quality and quantity. Since Tuolumne County is a Watershed District, water quality is an issue individually and collectively. As indicated earlier, homeowner practices can result in dangerous contaminants inadvertently entering the water supply.

With the ongoing water shortages, reducing water use is critically important. Selecting drought tolerant and native plants, mulching, reducing lawn size, watering

deeply and less frequently, capturing rainfall through the rainwater catchments systems, permeable surfaces and swales, are methods for reducing the amount of water consumed for outdoor use.

*To reduce the amount of yard waste entering the waste management system. Most green waste can be recycled into productive use. For example, twigs, clippings and leaves can be combined to make nutrient rich compost for replenishing the soil. Grass clippings can be left on lawns to provide nitrogen and pine needles can be used as mulch for acid loving plants. If necessary to remove yard waste from the property, take it to a facility that recycles it into compost or mulch such as the Waste Management site on Camage in Sonora or the Plainview slash site in Twain Harte.

*To protect soil quality. Although critically important for farmers, protecting soil quality is also an issue for homeowners. Keeping it covered to prevent erosion, avoiding compaction by heavy equipment, reducing the use of herbicides, fertilizers and pesticides and eliminating tilling will support invisible forms of soil life. Worms, fungi, bacteria, and nematodes improve soil structure by tunneling, and add nutrients in forms that are immediately useful to plant growth.

*To detect and manage invasive plants. All homeowners should aggressively target and remove invasive weeds such as yellow starthistle, Klamath weed (St John's Wort or hypericum perforatum), Scotch and Spanish Brooms and Tree of Heaven (Ailanthus altissima) to prevent their further spread throughout the County.

When selecting plants for the landscape, those with the potential for spreading into surrounding areas and crowding out native vegetation should be avoided. Examples are English ivy, vinca major, and pampas grass.

*To protect property and wildlands from fire. By law, all homeowners must create at least 100 feet of defensible space to reduce the threat of fire to their property as well as everything around it. Certain landscape practices and plant selections make the 30 foot zone immediately around the house, "lean, clean and green". Eliminating ladder fuels, keeping areas around the house green and watered and avoiding storing flammable materials within 10 feet of the house are some ways to limit fire damage.

For those interested in learning more about environmentally responsive and sustainable horticultural practices, visit the MG Demonstration Garden at 251 S. Barretta Street in Sonora (the Cassina High Campus) on the first Saturday of each month from 10:00 a.m. until 1:00 p.m. or contact Becky Miller-Cripps at the County Extension Office (533-5696) to arrange a free home visit.

Marlys Bell is developing her property to demonstrate sustainable gardening practices.