



THE YOLO GARDENER

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Good Bugs, Bad Bugs

Willa Bowman Pettygrove, Yolo County U.C.C.E. Master Gardener

Part of my challenge as a Master Gardener is to convince members of the public (including you, reader) that something that seems complicated is in fact simple, easy to understand, and better for all concerned... and won't take too much money or time. This time, that something is "Integrated Pest Management."

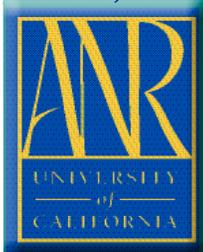
You have to be older than me (pretty old) to remember a time when pest control could be summarized in the slogan "Quick Henry, the Flit!" None other than Theodore Giesel (Dr. Seuss) coined this slogan to sell Flit, a chemical (active ingredient: pyrethrum) that could be the solution to many pest problems. In the 1930s, such a solution could be justified as a patriotic duty as well as a public health necessity, especially for mosquito control to prevent malaria. Since that innocent time we have learned that the costs of some pesticides far outweighed their benefits.

What is Integrated Pest Management? Integrated Pest Management (IPM) is a way of managing pests that often uses multiple strategies. The University of California's definition of IPM includes the following:

- An ecosystem-based strategy focused on long-term prevention (for example, before you put herbicide on that troublesome Bermudagrass, look to eliminate leaky irrigation that only encourages it);
- Use of multiple techniques such as biological control, habitat manipulation, modification of cultural practices, and resistant varieties. Examples include making your garden attractive to lady bugs so that they will eat your aphids, caulking cracks in your house to discourage ant invasions, irrigating in the morning instead of at night to prevent disease development, and planting VFN tomato varieties that have resistance to Verticillium, Fusarium, and nematodes); and



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- Selection and application of pest control materials to minimize risks to human health, beneficial and non-target organisms, and the environment (*for example, use iron phosphate for slugs and snails instead of other baits that are toxic to children and pets, avoid broad-spectrum insecticides that will kill pollinators and beneficial predators along with pests, and don't allow pesticides to runoff into storm drains*).

Why do UC Master Gardeners encourage IPM as best practice for pest control?

For Young Entomologists: Help Find a Really Good Bug

Did you know there are many kinds of ladybugs? The Vedalia ladybug from Australia saved California's citrus industry early in the twentieth century. Native ladybugs are becoming very scarce, as imported ones become more numerous. Scientists at Cornell University are becoming concerned.

The natural curiosity and affinity for ladybugs that many children express is being used to help. You could involve a child or group of children in looking for rare ladybugs. The Cornell Entomology Department Lost Ladybug project has useful information on how to carefully capture, photograph, and release ladybugs, sending the digital images to Cornell. For more information, go to www.lostladybug.org. This Web site has interesting pictures and other resources for teachers and home-schoolers.

This is an opportunity to engage young learners in an appreciation for beneficial organisms and basic concepts of integrated pest management.

□ Techniques that discourage pests also encourage beneficial predators and pollinators. I planted gourds in my garden for the first time, as much for their delightful flowers that attract native bees as for produce.

□ You can start inviting “friends” into the garden, in the form of beneficial insects, even before you know what they are. Avoiding broad-spectrum insecticides makes it easier for beneficial predators (wasps, ladybugs, lacewings, nematodes) to do their work. Some of them are so tiny you may not recognize them. (A hand lens may help.)

□ By monitoring conditions in the garden and deciding what is needed, you are more in control. Also, there are resources available to you, including UC IPM *Pest Notes* and *Quick Tips* (available online at: www.ipm.ucdavis.edu) to help you become more competent and successful as a gardener.

□ You may find that effective strategies cost less, too. More efficient use of fertilizer and water will be better for the plants and waste less. You can save time by preventing dispersal of annual weed seeds, instead of

having to hand pull mature plants later in the season. Planting cover crops is good both for soil fertility and for control of annual weeds.

- Many IPM “strategies” are tried and true techniques that grandma used in her garden. Mulch, compost, physical removal of pests, barriers to keep pests out of the house and garden areas—these are all things that were used long before gardeners had chemicals like Flit to use. Now we know more about why they work, including recognition of predatory and parasitic organisms that help us do our job. The ladybug is just one. There are also beneficial nematodes, lacewings, wasps, as well as bacterial agents, that target specific pests. Many of these can only exist where broad-spectrum pesticides are not used because these pesticides don't differentiate between the good bug and bad bugs.

IPM does not exclude all forms of pesticides, but uses them as a last resort, and in combination with other preventive mechanisms. Where deemed necessary, selective pesticides are used in ways that target the pest, such as bait stations or spot treatment of perennial weeds.

To learn more, see the Pest Notes at <http://www.ipm.ucdavis.edu/PDF/PESTNOTES/index.html> and Quick Tips at <http://www.ipm.ucdavis.edu/PDF/PESTNOTES/index.html>. 



A hand lens helps you see and appreciate those tiny beneficients, and budding entomologists (see sidebar)

Garden Discovery

Peggy Smith, Yolo County U.C.C.E. Master Gardener

As an avid gardener I am conscious of my soil - amending when needed, mulching, weeding - but a gardener's primary focus tends to be on what the soil is producing whether fruit, vegetable, bloom or foliage. Thanks to the fascinating eruption of two fungi (nicknamed the "humungous fungus") from a newly composted, but unplanted bed, I went on a research journey into the "Alice In Wonderland"-like world of the fungi kingdom. These large capsules impressed me, but what happens in the underground world of the fungi was even more fascinatingly complex.

In order to classify and understand our biosphere, scientists have grouped together similar organisms into kingdoms. The plant kingdom and animal kingdom are easy to comprehend ...and the lowly fungus has its own kingdom!

In the garden the fungal kingdom includes mushrooms, rusts, smuts, puffballs, truffles, morels, moulds and yeasts. 70,000 fungi have been documented and described, but the estimate is of at least 1.5 million species of fungus in the biosphere. Fungi have similar attributes to plants and animals at a cellular level and they have the same biological ability as animals



The Dead Man's Foot protruding from the author's garden

to break down more complex molecules to simple molecules for nutrition. Animals extract their nutrition with a digestive system that includes a stomach. Fungi have a similar process but without a stomach. They live within their food source and take up nutrients through the many filaments (mycelium) that they infiltrate into the food source. When the food source is consumed, a fungus produces a fruiting body, which is what we see in the garden as fungus or mushroom erupting from the soil or decaying matter.

Fungi are saprobes, which are organisms that obtain their nutrition from the dead remains of other organisms. As the primary decomposers, fungi are the natural recyclers of the biological world. Fungi are the only multicellular organisms that are able to break down the tough structural plant proteins of cellulose and lignin. These are the protein compounds that give plants strong cell walls thus enabling them to grow into the many beautiful forms of which we are familiar from tiny alpine plants to large trees. Specialized fungi can even break down the remains of animal decomposition,



hair, hooves or fingernails. Another group of fungi are able to break down the keratin and chitin in shellfish and insect exoskeletons.

Back to my humungous fungus! Identified as *Pisolithus tinctorius* (common name: Dead Man's Foot), it is a common fungus of California and the North-West Pacific. It can be found associated with trees and also in open areas. Specimens have been seen pushing through asphalt in parking lots. Often found as a single specimen, it is also found in small groupings. It usually pushes its fruiting body when the weather is hot and dry in the summer and fall. The capsule contains millions of chestnut brown, black, gold or dark

blue spores that will stain on contact with any kind of surface. This fungus has been used as a material dye in many cultures. Young specimens are similar to my garden specimen with large, puffball-like capsules. When the capsule breaks down, older specimens look like brown dusty wood stumps. The fungus can range in size from 2" – 12" high and 1.5" to 8" wide.

One important mutual-beneficial biological function of fungi is the formation of mycorrhiza with a variety of plants and trees. Mycorrhiza are formed when the fungi pushes out filaments (mycelium) that come into contact on a cellular level with the cell walls of the fine roots of a plant or tree. This contact allows the simple sugars, glucose and sucrose in the root zone of the plant or tree to provide nutrition for the fungus and, in exchange, the plant or tree gains access to the fungi's extensive filamental mycelium that allows greater water absorption and access to minerals essential for the growth of the plant or tree.

Pisolithus tinctorius (Dead Man's Foot) has been studied extensively for its mycorrhizal relationship with red oak, black oak, eucalyptus, acacia and a variety of conifers. Seasonal rains after forest fires or clear-cutting leach the soil of its phosphorous and nitrogen, which are essential minerals for plant growth. Combining new seedling plantings with *Pisolithus tinctorius* inoculant produces better growth in the new plantings. The fungus captures the phosphorus and the seedling can access this essential mineral from the fungi through the mycorrhizal filament growth. Some fungi host nitrogen-fixing bacteria, allowing plants and trees easier access to another essential mineral. Other fungi inoculants are used with plantings to restore areas that have been mined.

It is estimated that the size of the fungal bio mass at least equals, if not surpasses, the bio mass of the human population. An exceptional fungal example was a *Rigidoporus ulmarius* in Kew Gardens, London, that produced the largest known fruiting body at 5' 7" high and 4' 4" wide, with an approximate weight of 625 pounds. That is just what we see on the surface; how

large would the filament (mycelium) bed be for a fungus of that size? It certainly puts my sample to shame. There are several examples of large filament beds that only push small fruiting bodies such as a fungal clone in Washington state of *Armillaria ostayae* that covers 1,500 acres.

I plan to keep observing my *Pisolithus tinctorius* to see how large it gets and when it finally breaks and becomes a fungal dead wood imitator in my garden. My garden soil's health has always been important, but I now appreciate how much we depend on the lowly, mostly unseen fungus, to help create this wonderful growing medium for our beautiful fruits, vegetables flowers and trees. 

Gardening for Seniors: A Lifelong Pleasure

Jan Bower, Yolo County U.C.C.E. Master Gardener

What is a senior gardener?

There is no simple answer to this question. A senior gardener could be defined as one who is, approaching, or beyond the age of retirement, but even this is problematic since AARP (American Association of Retired Persons) allows membership at age fifty, while the standard retirement age is 65 and often beyond for financial reasons. In this article let's think of seniors as those who have the maturity and wisdom to recognize that they might have to make compromises and adjustments to continue doing what they love to do – that is, gardening. The often heard “I just can't keep up with it” doesn't mean that one has to stop gardening, but it may mean that one has to reduce one's gardening chores by getting outside help, redesigning garden space, or adopting new techniques and tools. Songwriter Johnny Mercer had the answer: “Something's gotta give.”

Approaches to simplifying gardening.

There are several approaches to gardening wisely as one ages. One involves using lower maintenance plants. Get rid of some of the perennials, especially those that need regular deadheading, staking, cutting back, or division. The choice of what to keep and what to part with is highly personal, but if one genus or species monopolizes your time and dominates your garden, think about reducing its number. While daylilies remain an all-time favorite, choices can be limited to a particular color scheme. Keep those plants that have handsome foliage when not in bloom and make an all season contribution to the beauty of the garden. Evergreen and conifer shrubs, for example, offer year round color and need pruning only once or twice a year. Bulbs and ground cover are also good additions to the garden because they virtually take care of themselves.

Although energy, physical abilities and health may become more limited as one ages, gardens have the potential to keep one young at heart, physically fit, and out in the fresh air.

When you feel overwhelmed by all the things that cry out to be done in the garden, making a “to do” list can be helpful. If you have help in the garden, a prioritized list of tasks will not only save time and money, but will allow your helper to complement rather than duplicate your gardening style and effort. Keeping a “month-at-a-glance” calendar is also useful when hiring an arborist or a landscape service for annual jobs, such as spring and fall clean-up, spreading yards of organic mulch, and pruning trees and hedges.

There are many labor-saving techniques in gardening. Mulching plants to eliminate weeding and to retain moisture is one of them. Let nature take its course by leaving dead leaves and lawn clippings on the ground to contribute nutrients to the soil. If you have a buffer of trees that belong to your neighbor, borrow their view and let them provide a backdrop for a shrub border. If you have a lawn, replace it with a carefree meadow of wildflowers and native plants.



Telescopic fruit picker

There are also many suitable tools for seniors. For example, it may not be safe to use a ladder for harvesting fruit, so a long-reach or extendable grabber can be useful. If you have nuts in the garden, a long-handled nut collector can save you from bending. Watering wands and self-coiling garden hoses make watering easier.



Ground picker

Gardeners may find it necessary to move to smaller and more manageable living quarters as they grow older. This may be the time to set up a container garden using potted plants, window boxes, and hanging baskets, which requires less physical work than an in-the-ground garden and afford much of the same joy and satisfaction. Raised beds, arches, trellises, fences, and obelisks can be used to increase gardening space. Develop a new hobby of making miniature landscapes (bonsai) in hypertufa troughs. This is still gardening, but on the smallest possible scale.

Personal experience

I have had many gardens, in Michigan, Illinois, Iowa, Wisconsin, California and Nova Scotia. In each place, the garden took a great deal of time and energy, but I loved every hour spent digging, planting and pruning. Although my husband has admired my gardens, he is not himself an avid gardener; however, he does give me some assistance and is very supportive of my gardening interests. Now in my late seventies, I still love gardening, but am finding it harder to manage my rather busy life. I need to balance the many opposing demands on my time and energy, along with some new physical limitations, and make adjustments to my routine. Sooner or later, every aging gardener may face similar challenges. This involves determining how to continue making a beautiful outside space with ease and safety with the resources you still have at your command.

Note: The material for this article was largely gleaned from *Gardening for a Lifetime* by Sydney Eddison, published in 2010 by Timber Press. 🍅

As Gardens Grow

Laura Cameron, Yolo County U.C.C.E. Master Gardener

You may be hesitant to redesign your garden you previously put so much effort into, but now looks hopelessly shaggy and overgrown. As in all things, gardens change. Our ideas of what we thought would look good ended up – for a variety of reasons – not working out. Possibly the desire for a formal garden melded into the need for a secret garden. Of course there will be no admission that the Bermuda grass that was thoroughly eradicated returned. In some cases it is a combination of events that require a garden remodel. Be not afraid, it is easier than you may think.

Step 1.

Look at your garden with a critical eye; one garden room at a time. Does it look like you want it to? Has the upright Rosemary grown so large it has created its own weather pattern? Does that lovely ground cover by the sidewalk not look so good year round? Are you truly happy or smiling when you look at your landscape, or are you just sort of content? Is your landscape fully satisfying your esthetic or outdoor space needs? If not, proceed on:

Step 2.

Edit carefully in your mind's eye; one garden room at a time. Will a trim of the rosemary be enough? Do I need to remove the ground cover? Have the other plantings matured enough that replacing ground cover isn't needed? Will I need to remove some plants to eradicate the Bermuda grass (insert favorite weed to hate here)? Is everything too crowded? Am I happy with the color scheme? Do I have enough height variation? Do I want more color year round? Do I have enough low maintenance/high maintenance plants? I want more outdoor seating; where can it go and what needs to change?

Step 3.

Unless you are prepared to put in lots of time and effort right now, scorched earth is not a good plan. Begin small, trim the oversize plants first. Does the ground cover look better or worse now? Remove weeds. Remove some ground cover or plants. Look again. Take a walk and look at what you just did from a different angle. The tree in the background you hadn't noticed now looks like it needs to be edited. Trim a few branches back. Suddenly you have a new garden look. Is it enough?

Step 4.

Add a generous layer of mulch (bark, wood chips, walnut shells, grape seeds ...) to the area you stripped of weeds and ground cover. This simple top layer adds a finished look to any area while nourishing the soil and retaining water. Wait a week and look again at your garden with a fresh eye. Some areas will look better, others worse and some just right.

Step 5.

Play. There is now a lovely pathway through the yard: leave it; add a stone path; add a bit of yard art to catch the eye? Add the outdoor seating. Decide that indeed you want some low plants along the edge of the garden. Think about what you didn't like about the previous plantings and how you would like the sidewalk area to look like. This will help focus your eye for the right plant when shopping at the nursery.



Step 6.

Repeat with each garden room that did not pass the critical eye test.

Step 7.

Enjoy your freshened-up garden. See – it's that easy!



Why Agricultural Inspection?

David Studer, Yolo County U.C.C.E. Master Gardener

The Inspectors

Anyone landing at a California airport after traveling abroad may encounter a cute beagle nosing around their stuff at baggage claim. Look at those floppy ears and those big eyes. He seems friendly enough, and he means no harm. Don't you just want to pick him up and give him a big hug? I bet you do. Please don't. He or she works for the USDA's Agricultural Inspection Program known as the "Beagle Brigade", and they have a serious job to do. These beagles—along with their handlers—represent California's first line of defense against agricultural pests and invasive weeds that could ruin a multi-billion dollar agricultural industry and send the State's economy into a tailspin.

Members of the Beagle Brigade (including the handlers) receive training from the US Department of Agricultural Detector Dog Training Center in Orlando, Florida. Once trained, the Beagle Brigade patrols major international airports in the United States to prevent the introduction of destructive insects and invasive weeds from entering the country.

The Beagles come from owners, breeders, and shelters. The USDA selects dogs for their well-developed sense of smell, their ability to get along with people—especially children—and their willingness to work for kibble! How about that?!

They are not alone. The California Department of Food and Agriculture (CDFA) deploys its own dog teams made up of rescue dogs from shelters to inspect packages entering the State at parcel delivery facilities

and air freight terminals. Meet the dogs and watch a video of them at work on CDFA's Detection Dog Teams Web site (<http://www.cdffa.ca.gov/plant/dogteams/index.html>). According to CDFA, "Between July 1, 2009 - June 30, 2010, California Dog Teams alerted on 56,753 total marked and unmarked parcels containing agricultural product." That's a lot of agricultural products coming into California. The Web site points out that the dog teams intercepted 53 pests.

Of course there are human inspectors as well. They work with the dogs at airports and parcel transit sites, and they also work at the dozen or so border stations on major highways into California. If you have ever driven into California from out of state, you might notice these inspection stations. They mostly inspect trucks, but they will pull over automobiles on occasion.

Why all of this agricultural inspection, anyway?

While protecting agricultural crops is a good reason to keep pests out, it is not the only benefit to agricultural inspection. California is home to an incredible diversity of native plants that are threatened each day by invasive weeds and insects. These native plants provide food, nesting material, and shelter to native birds and insects. Invasive species do a lot of damage to the environment, for example, the aquatic plant Hydrilla clogs our waterways, beetles chew down our forests, and invasive weeds choke out native plants.

California, in particular, is surrounded by

barriers that prevent the rapid natural migration of “exotic” species into the state—the desert in the south and southwest, the Sierra Nevada Mountains on the east, the Cascade Range to the north, and the Pacific Ocean to the west. It’s rare that a pest or weed seed would blow in on the wind, because the prevailing wind comes from the Pacific. Oh, we have our share of pests and weeds, but how did they get here? We bring them in when we bring home fruits or vegetables from other places in the U.S. and around the world. Most, if not all, of the recent pest infestations were first detected in urban areas rather than in agricultural or wilderness areas. Exotic pests often begin life in California in someone’s fruit tree, vegetable garden, ornamental bush, or woodpile.



Agricultural Inspection Station at Truckee

A Short Story of Horror and Destruction

Joe Traveler buys a beautiful peach at a roadside stand the morning before he flies home from Hawaii. He puts it into his carry-on bag and decides to eat it during the flight, but instead he falls asleep and forgets that he has the peach. At the Agricultural Inspection Station he fails to declare the peach, and the “Beagle Brigade” is on a break (this is unlikely, but for the sake of our story they are on a break). When Joe gets home, he finds the peach in his bag and decides to save it for breakfast. Morning comes and Joe takes a big bite into the peach, only to find that it is loaded with maggots! Yuck and Double YUCK! (The Horror!) At this point, Joe should seal the peach and all of the maggots in a zip-lock bag and take it to the county Agricultural Extension to be properly destroyed. Does Joe do the right thing? Probably not; more likely, the peach goes into the trash and the little maggots grow up to be Mediterranean Fruit Flies. The End . . . or is it?

California has spent millions of dollars trying to keep Medfly, as it is commonly known, from becoming established in the State. Jerry Brown had a famous fight against Medfly in 1980 during his first stint as Governor. That fight cost \$80 million alone.

What can you do?

First, obey the agricultural inspection restrictions. Don’t get clever and think that you can get around the “hassle” of declaring your fruit or vegetables. If the Beagle Brigade or the agricultural inspectors find your fruit, you may get lucky enough that they will only take it away from you. More likely, you will be unlucky and get fined (and they will still take the produce away). Fines these days can be as much as \$1,000.

The \$1,000 fine you might pay for being a “smarty-pants” and trying to avoid the agricultural inspection is a small price to pay. Consider the real consequences of exotic species introduced into our environment, the destruction of our native plants and habitat as well as threats to our agriculture. Remember: Don’t pack a pest!

Happy gardening. 

Your Neighbors are Asking . . .

Betsy Lurie, Yolo County U.C.C.E. Master Gardener

Below is a sampling of questions that arrive at the Master Gardener Hotline, (530) 666-8737. Be sure to contact us with any questions you might have at the hotline, the Woodland or Davis farmers' markets, or at our email, mgyolo@ucdavis.edu.

1. I am new to Yolo County and want to know if I can grow peonies here. I've been told it doesn't get cold enough in the winter. Is this true?

I had heard this also. When cutting back some overgrown rosemary, however, I stumbled upon a beautiful specimen, obviously planted by a previous owner. As if thanking me for the gift of fresh air, water, and sunlight, it has rewarded me with stunning blooms for the last several years. As I write this (April 11), it sports a bloom the size of a small grapefruit. Obviously they grow here. So let's consider the facts of peony culture.

Hundreds of varieties of peonies (*Paeonia*) are available. These beautiful spring bloomers come in three basic types: herbaceous peonies (the bulk of those available are hybrids); tree peonies; and intersectional hybrid peonies, a newer type that combines the best of herbaceous and tree traits. While it's true that peonies prefer cool climates and need a period of winter chill, many hybrid herbaceous and intersectional types do fine in our climate. Within Yolo County, Woodland drops to cooler winter temperatures than Davis, giving it a theoretical advantage. With a little thought given to site choice and preparation, however, you should be able to grow peonies anywhere in our county. Intersectional and tree peonies require less winter chill.

Herbaceous and intersectional hybrids are grown from rhizomes which send up bushy clumps of attractive foliage in the spring. Strong stems sport large flowers which come in three forms--single or semi-double, with one or two rows of petals; Japanese, with a single row of petals and a large central fluff of petal-like segments called staminodes; or double, the traditional pompom-like peony. Colors range from deep red through pinks, creams, and even yellows.

To plant, choose a location with afternoon shade that is protected from strong winds. My peony is doing well on the east side of the house where it sits in a somewhat protected spot getting morning sun, afternoon shade, and regular water from a drip system. **Peonies are best set out in fall from rhizomes or nursery containers** (they can also be planted from containers in the spring). Prepare the soil a few days before planting by turning in plenty of compost and some high-phosphorus fertilizer. If planting from a container, just set the top of the root ball level with the soil. Rhizomes have thick tuberous roots and several growth buds called eyes. In our mild climate, position them with eyes up about an inch below the soil surface. Don't go deeper than this; deeper planting is only suitable in colder climates. Tree peonies should be planted with the graft line 6 to 8 inches below the soil surface. Peonies may not bloom the first year but should do well after that. Blooms are often so wonderfully large and heavy that they require staking! These top heavy flowers are another reason why they do best protected from strong winds.

Experts disagree on the use of fertilizer. Sunset recommends feeding with low-nitrogen fertilizer as first leaves unfurl and then again as last flower fades. They also suggest applying one cup of 50-50 mix bonemeal and triple superphosphate after leaf drop in the fall. However, I have done well with merely spreading a little compost around annually, and the folks at Chateau CharMarron Peony Gardens in San Jose caution that excess feeding will decrease both number of blossoms and lifespan of plant. They claim to have successfully grown thousands of peonies using compost without additional fertilizer. Herbaceous and intersectional peonies die back in the fall and the browning foliage should be cut back to ground level.

So go ahead! Peruse the catalogs and check out local gardens for varieties noted to do well in warm climates. Sunset has an interesting slideshow at <http://www.sunset.com/garden/flowers-plants/how-to-grow-peonies> and there are about 200 varieties on display at the Chateau CharMarron Peony Gardens in San Jose. Varieties known for doing well in warmer climates include “Charlie’s White,” “Festiva Maxima,” “Kansas,” and “Do Tell.”

2. I am having an ongoing problem (2-3 years) with dodder in my planter beds. How do you recommend dealing with this?

I am very sorry to hear you are dealing with this hard-to-control parasite. Dodder, genus *Cuscuta*, has over 150 species that infect many host species. The only good thing I can think of to say about dodder is that the genus is extremely easy to identify. Host plants are entwined with orange, red or golden threadlike shoots that can, in the case of Japanese dodder, get as thick as spaghetti. This bright mass of stringy tenacious stems stand out in clear contrast to the host plant.

Native dodders can infest many species found in Yolo County such as tomato, beet, melon, chrysanthemum, mint and petunia. It even favors weed species like field bindweed and pigweed. The native dodders can be leafless or have tiny scale-like triangular leaves about 1/16 inch long. Creamy bell shaped flowers are about 1/8 inch and usually form clusters. Seedlings and stems are threadlike.

Japanese dodder, in contrast, has thicker stems, no leaves, and rarely flowers. **If you think you might have Japanese dodder, do not try to control it yourself!** This noxious weed is under an eradication program in many California counties, including Yolo and Sacramento. Contact the agricultural commissioner for help with control and find more information at www.cdffa.ca.gov/phpps/ipc/noxweedinfo/noxweedinfo_jdodder.htm.

Successful control of native dodder takes patience and a combination of treatment methods. You must control current growth, prevent seed production, and suppress seedlings. Hand pull seedlings and prune out infestations by cutting out host plant 1/8 to 1/4 inch below point of attachment. **Do your utmost to remove plant before it has a chance to set seed (this happens from late summer to fall).** Dodder seed is very hardy and can survive solarization, composting, and burning. In cases of severe infestation, remove host plants, place them in a plastic bag and put them in the trash. Care must be taken to isolate the infested area. Inspect and clean clothing and garden tools that come in contact with problem area. Replace infested plants with nonhost species and rotate nonhost vegetable crops for several years. Herbicides are usually not recommended for dodder control in a home landscape. More detailed information and a list of susceptible plants can be found on the IPM website below.

Source: “Dodder” Pest Notes Publication 7496 <http://www.ipm.ucdavis.edu/PMG/PESTNOTES/pn7496.html> 

Fall Gardening Tips

Linda Parsons, Yolo County U.C.C.E. Master Gardener

Our long, warm summer days are giving way to the cooler and shorter days of autumn. Cozier and mellower days are beckoning us to harvest our summer bounty and prepare for the quiet that comes with the season. You still have time to save a bit of summer by preserving summer fruit and vegetables. You can supplement with fresh produce from your local farms.

It is time to take an inventory of your garden. What has worked well, and what would you like to change or add to your garden? Make plans for the improvements you wish to make this fall and into the New Year.

Autumn is the best time to introduce a new tree, plant, shrub or set of bulbs. If you have wanted to rearrange or redesign your garden, this coincides well with fall gardening. While you tidy your garden and make it ready for its winter nap, begin to edit and add to your garden.

Think of the possibilities and anticipate the added beauty you will enjoy in the years to come. Visit local nurseries, public gardens, the UC Arboretum or stroll through several new neighborhoods. You will surely find a plant or tree that will add interest and beauty to your garden.

Summer is slipping away. It is time for fall gardening.

Fall Cleanup

- Remove fallen fruits, vegetables, leaves, spent flowers and weeds.
- Pinch back plants to allow tomatoes, melons and squash enough time to mature before frost sets in.
- Remove unproductive plants.
- Take down pea trellises, beanpoles and tomato supports.
- Clean garden supports and stakes with a diluted solution of bleach before storing them for future

use.

- Pick tomatoes when daytime temperatures no longer rise above 65° F. Wrap them in newspaper and let them ripen indoors.
- Maintain your compost pile by adding clean garden waste and leaves.
- Control earwigs, snails and slugs.
- Apply liquid copper to citrus to prevent brown rot.
- Apply the first dormant spray to fruit trees and in November.
- Apply liquid copper to nectarines, peaches and apricots in November and follow up with an application in December and February.



Feed and Amend

- Feed and amend your garden soil. Add manure and compost to improve soil structure and fertility.
- Apply a layer of leaves, straw or newspaper to your soil surface to reduce weeds next spring and improve soil structure.
- Amend your soil and add a complete fertilizer if you plant winter crops, flowers, bulbs or seeds.
- Apply a final application of fertilizer to citrus plants.

Lawn care

- Renovate a poorly-performing lawn by dethatching, aerating, fertilizing and over seeding it with either an annual or perennial rye or fescue mix, to keep it green through the winter.

- Feed lawns in early fall with a pre-emergent and a complete fertilizer (one that contains nitrogen, phosphorus and potassium).
- Feed in late fall with a slow-release complete fertilizer, such as one labeled “winterizer.”
- Adjust the watering cycle on your lawn. It will require less water in the fall and little or none in the winter.
- Continue to mow weekly and check your sprinkler system. Be sure it is properly adjusted and that all the nozzles are working.
- Lower the height of your mower blade.
- Remove dead leaves from your lawn regularly to prevent your lawn from expiring from lack of sunlight or from contracting fungus infections.
- Fall is the best time to put in a new lawn with either seed or sod.

Annuals and Perennials

- Continue deadheading and removing unsightly leaves.
- Divide and transplant bulbs, tubers and corms.
- If your oriental poppies, bearded iris, peonies, agapanthus and daylilies are becoming less vigorous and unattractive, fall is the season to divide and replant them.
- Share extra bulbs, corms and tubers with a friend.
- Enjoy the fall color of perennials. Wait until spring to trim or cut them back.
- Evergreen perennials should not be cut back in the fall. These include rock cress, creeping sedum, creeping phlox and hens and chickens.
- Roses should keep producing flowers into December, but don’t fertilize after September. Deadhead as needed unless you prefer colorful rose hips to develop and provide winter interest.
- Plant fall flowers, such as calendulas, chrysanthemums, bachelor buttons, dianthus, forget-me-knots, sweet peas, primroses and violas. Many of these will over-winter and provide lush color in the spring.
- Spring-blooming perennials, such as foxglove, columbine, salvia, and daylilies can be planted now. Combine these with daffodils, freesias, tulips and other spring bulbs, which should be

planted no later than the end of October.

- Fall is the best time to introduce perennials to your garden.
- Plant winter vegetables, such as broccoli, lettuce, endive, parsley, garlic and onion sets now.
- Take cuttings of your favorite annuals. Favorite choices are geraniums, coleus, begonias and impatiens. Gradually move plants to shadier locations so they will adjust to the lower light levels when you move them indoors.
- Prune cane berries and grapes.

Trees and Shrubs

- Fall is the best time to plant trees and shrubs. The cooler air temperature and still warm soil provide ideal conditions for new plant roots to take hold.



- For autumn colors of red, gold or yellow, choose these trees: Chinese pistache (*Pistacia chinensis*), ginkgo (*Ginkgo biloba*), tupelo (*Nyssa sylvatica*), scarlet oak (*Quercus coccinea*), red oak (*Quercus rubra*), chanticleer pear (*Pyrus calleryana* “chanticleer”), or red maple (*Acer rubrum*).
- Plant drought-tolerant trees such as valley oak (*Quercus lobata*), blue oak (*Quercus douglasii*), or a Japanese pagoda tree (*Sophora japonica*). A new favorite is the Chinese Fringe Tree (*Chionanthus retusus*).
- Apply manure and compost to help your trees emerge from dormancy with lush leaves and flowers.
- Plant easy-care and drought-tolerant shrubs, such as crape myrtle (*Lagerstroemia*), California lilac (*Ceanothus hybrids*), heavenly bamboo (*Nandina domestica*), tobira (*Pittosporum tobira*),

- and western redbud (*Cercis occidentalis*).
- Deep-water trees as they enter dormancy.
- Prune and shape trees in late fall.

Garden Keeping

- Sharpen spades, loppers, pruners and your lawn mower blade. You can use a file or take your tools to a professional sharpener.
- Take your lawn mower to a professional for an annual tune-up.
- Clean, disinfect and oil your tools, so they will be ready for pruning roses, trees and shrubs from late fall to early spring.
- Keep birdbaths and feeders clean and full for migrating birds.
- Check out your local farmer's market or pumpkin patch for a colorful selection of fall decorations, including pumpkins, gourds, dried corn and fall flowers.
- Keep a journal. Record your watering cycle information, pruning, spraying and planting information. Make a list of garden improvements and fun ideas.
- Collect seeds from your garden.
- Check out your favorite garden catalogs. It is time to think about ordering next spring's seeds, bare root roses and garden tools.
- For more information on vegetables, ornamentals, fruit trees or lawn care, visit www.ipm.ucdavis.edu.

Garden fun: Make a scarecrow or a fall home decoration. Swap plants and seeds with friends. Take a garden tour or rose propagation class on September 15 at the Old City Cemetery. (Visit oldcitycemetery.com for an extensive list of tours and fun activities in this venerable old garden.) Attend a UC Master Gardener Class. Visit <http://www.ceyolo.ucdavis.edu>

Fun things to do

* One of our family's favorite fall adventures is spending a day at Apple Hill. My thoughts turn to pies, cookies, muffins and preserves made from apples, pumpkin and many harvest delights. There are many farms that sell apples, pumpkins and other fall fruit, and allow you to pick your own. The local foothill

vineyards are another fun excursion and offer picnic areas. In addition, there are many fall activities from September through November. Visit <http://www.applehill.com> for more information

* California State Fall Home and Garden Show in Sacramento, September 14-16, 2012 through January 4-6, 2013.

* Davis Central Park Fall Festival: October 27, 2012, 8:00 a.m.-1:00 p.m. Visit <http://www.davisfarmersmarket.org> for more information.

* UC Davis Arboretum Plant Sale: September 29, 2012-October 14, 2012. Visit <http://www.arboretum.ucdavis.edu> for more info.

* Heidrick Ag History Center/ Pumpkin Smash and Bash: October 27, 2012, 6-9 p.m. Visit <http://www.aghistor.org> for more information.

* Fair Oaks Horticultural Center Garden Workshop: September 22, 2012, 8:30-11:30 a.m.; Open Gardens October 17, 2012, 11 a.m.-2:00 p.m.

* Celebrate the Autumnal Equinox on September 22, 2012, or the Winter Solstice on December 11, 2012.

Local Garden Shows:
farmerfred.com
bobtanem.com
davisgardenshow.com

Garden Books

Are you a gardener that prefers to rearrange or "redecorate" your garden, rather than your home? Do you see gardens and garden articles that pique your interest to add new colors or repurpose an area of your garden? It seems I often find a new tree, plant or

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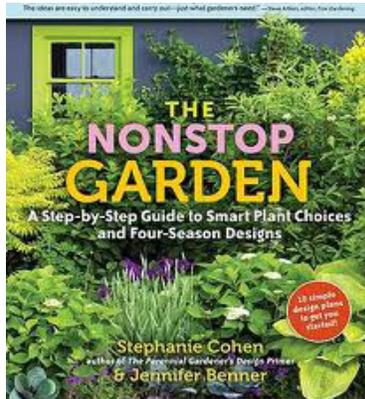
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garden idea that intrigues me. I have discovered several wonderful and easy-to-use guides to help with both simple and more ambitious garden designs.

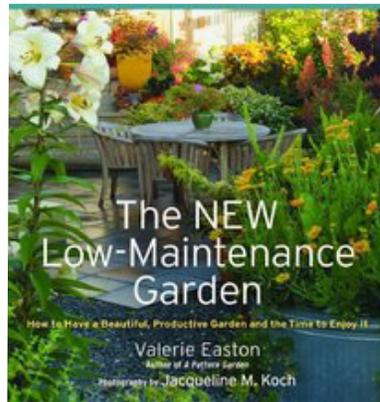
The Non-Stop Garden: A Step-by Step Guide to Smart Plant Choices and Four Season Designs, by Stephanie Cohen and Jennifer Benner. This is a great resource for helping to provide plant and design ideas for a beautiful garden through all four seasons. It is a well-organized book for both the beginner and more advanced gardener. Enjoy the down-to-earth advice and garden humor.



Enjoy the down-to-earth advice and garden humor.

Designer Plant Combinations: 105 Stunning Gardens Using 6 Plants or Fewer, by Scott Calhoun. If you want to bring out the artist in you, this is the perfect book to help you create a garden palette of your own design. The color photos illustrate the endless selection of compatible plants that you can use to design your garden. This is a delight to page through and ponder the possibilities!

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The New Low-Maintenance Garden: How to Have a Beautiful Productive Garden and the Time to Enjoy It, by Valerie Easton and Jacqueline M. Koch.

This book is perfect for the gardener who is short on time but wants a well-designed

and attractive garden. The emphasis is on trees, shrubs and grasses, with a few showy and artfully-placed plants and garden features. This resource will help you simplify and beautify your garden.

The Flower Fairies of Autumn, by Cicely Mary Baker. This is absolutely among my favorite childhood books, and I never cease to enjoy the gorgeous flower fairies and poems. This is a lovely book to share with the young gardeners in your life. A true gem!

“Youth is like spring, an over praised season more remarkable for biting winds than genial breezes. Autumn is the mellower season, and what we lose in flowers, we more than gain in fruits.”

Samuel Butler



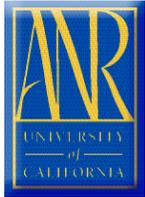
*Questions about your garden?
We'd love to help!*

Master Gardener Hotline..... (530) 666-8737

Our message centers will take your questions and information. Please leave your name, address, phone number and a description of your problem. A Master Gardener will research your problem and return your call.

E-Mail..... mgyolo@ucdavis.edu

Drop In..... Tuesday & Friday, 9-11 a.m.
70 Cottonwood St., Woodland



U.C. Cooperative Extension
 Yolo County Master Gardeners
 70 Cottonwood Street
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