

THE TOP TWENTY-FIVE GARDENING MYTHS, BAD HABITS AND EVEN A FEW SCAMS

25. DON'T put a layer of gravel or broken crockery in the bottoms of pots to provide drainage.

All that's needed is a small fragment of paper towel over the pot's drainage hole(s) to keep the fresh, fluffy new soil from slipping out in the actual initial potting stage. Or use window screen

This practice started decades ago when gardeners didn't have access to the perfectly-drained soil mixes we now use.

Back then, gardeners layered old sod, topsoil, and sticky compost, all of which became compressed and impeded drainage. They relied on a pile of something that did not compress to keep the bottom hole open.

In fact, any gravel or crockery in the bottom reduces the volume available for potting soil, as well as making everything heavier than it needs to be. And a little side disadvantage: all kinds of little critters love to nest in your crockery tent.

24. DON'T be afraid to get water on top of plants during the day

Many still believe that the sunlight is magnified by the water drop on the leaf to cause a leaf burn. Anyone who ever burned ants using a magnifying glass and the sun knows that the magnifying glass would not burn the ant if it were placed directly on the ant. Rather, it had to be held a distance (focal distance) from the ant to concentrate the sun's rays enough to burn the ant.

If this myth were true, all gardeners would cover all their plants prior to every rainstorm. Farmers would not be able to prevent widespread "leaf burn" after rain clouds gave way to sunshine. Forests would explode into a blaze at the first sign of a rainbow.

It is true, however, that getting "hard" water -- that which is high in dissolved salts -- on plants can cause some leaf "burn" when the water drops evaporate and leave behind dehydrated salts.

23. Some little myths:

- a. Don't grow yellow or pink or orange tomatoes because you think they're less acid than red tomatoes. They have identical pH.

- b. Don't worry that poinsettias are poisonous. They're not.

- c. Don't use Epsom Salts as a garden fertilizer. It's SALT.

- d. Don't use bleach to disinfect garden cutting tools. it's corrosive.

- e. Don't use gypsum to break up your clay or otherwise "hard" soil. Gypsum works on "alkali" soils (not to be confused with "alkaline" soils). Essentially, it replaces one bad salt molecule (sodium, which destroys soil texture, making it "hard") with a safer salt molecule (calcium sulfate); the safer salt allows the soil to form crumbles again.

- f. Don't use fertilizer pills, sticks, stakes, etc. Granular fertilizer is most effective.

22. DON'T stake trees beyond 6 to 18 months.

The purpose of staking a newly-planted tree (or tall shrub) is to make sure the rootball is stabilized enough to put out a good amount of roots that will anchor the new tree in place. The purpose is NOT to keep the upper part of the tree from snapping or blowing away in the breeze.

After 6 to 18 months, a healthy tree will become independent of stakes. That's when the tree becomes "established", meaning it can hold itself and can use water and nutrients from the soil.

A tree whose upper part does not hold up to expected wind after that time is the wrong tree for the site. Right Plant, Right place dictates that one must plant a tree tolerant of windy conditions. It does not mean plant a tree that stands up only when staked.

21. **DON'T fertilize the garden as a matter of course.**

Fact is, almost all plants that we use – or should use -- in our gardens require no fertilizer

Most plants that require any fertilizer require only a bit. What plants truly need to be fed?:

Lawns

Container plants

Subtropical plants

including citrus, hibiscus, some palms, gardenias

Vegetables

Annual flowers

Woodland plants (azaleas, hydrangeas, camellias)

These “feeders”, by the way, are NON-sustainable.

Unfortunately, most gardeners apply far more fertilizer than plants actually need.

AND those are often the same gardeners who complain about pest and disease problems.

Why is that?

Over-fertilization, especially with products high in nitrogen, produces an abundance of tender, succulent growth, which is what bugs enjoy munching on most. Such soft growth also is more prone to fungal and bacterial diseases

A side “don’t”:

Don’t fertilize sick plants. Fertilizing does not help and may actually put a truly diseased plant under even more stress.

If you have a sick plant, find out why it is sick. It could be getting too much water, not enough water, too much light, not enough light, etc.).

THEN take steps to fix the problem.

20. **DON'T top a tree to “bring it back down to size”.**

For years, home gardeners and even professionals have indiscriminately whacked into such fast-growing trees as mulberry, maples, Lombardy poplar, callery pear, sycamore, and more.

Tree topping is the most expensive and **DETRIMENTAL** form of pruning.

In the long-run, it leads to more problems and more pruning. Topping weakens the overall structure of the tree, causing limbs to drop, especially in storms. Topping a tree creates large wounds that allow rot and fungal decay to enter the tree.

And not only does it damage the tree's appearance, it almost always reduces the tree's life expectancy.

19. DON'T prune back the crown of a newly-planted tree to compensate for any roots lost during planting or transplanting.

Trees produce auxins -- special plant growth hormones -- that kick a tree into growing gear at the appropriate time.

These are concentrated in the **very tips** of dormant branches.

Removing these tips eliminates what the tree needs to get off to its best start.

For that matter, LITTLE pruning is necessary in the first TWO or THREE years after planting.

The only pruning truly necessary is the removal of dead or damaged branches and more than one leader on a tree that is to be trained as a straight tree.

This ALSO includes **NOT** removing trunk branches to give it more of a “tree” look.

18. DON'T make pruning cuts flush to the trunk or major branch.

You shouldn't leave serious stubs, of course, **BUT** when you do cut, it should be close to the **COLLAR** of the branch union.

The collar is the "shoulder" or bulge formed at the base of a branch by the annual production of overlapping layers of branch and stem tissues.

Cutting beyond this, or leaving a stub, interrupts the circulation of sap in the branch and upsets the healing process.

Cutting too close -- flush -- and removing the collar cuts into tissues in the trunk, creating a wound much larger than the collar area and opening up the trunk tissue to decay organisms.

17. Don't apply wound dressing to pruning cuts.

Wound dressings were once thought to accelerate wound closure, protect against insects and diseases, and reduce decay.

Research has shown that dressings not only do **NOT** reduce decay or speed closure and rarely do they prevent insect or disease infestation. Many kinds actually inhibit desired callus growth over the cut.

Worse -- tars, emulsions, asphalts and waxes can dry and crack and when water gets behind the crack, disease may be promoted rather than prevented.

The best treatment of a pruning cut is no treatment at all.

Make sure, however, that all cuts are clean. Use sharp tools.

16. DON'T leave your pruning until winter time.

With the exception of serious and heavy duty pruning of deciduous trees and shrub, the most effective and efficient pruning is done at other times.

Spring and summer is the better time to train trees, to tip them to keep them in bounds, to remove water-sprouts and suckers and to make selective cuts to open up the plant a bit.

The growing time is the best time to shape a tree to exactly as you want it.

15. DON'T routinely douse plants with pesticides when there aren't any pests in sight.

Pesticides should never be used as **preventive** sprays, especially the broad-spectrum products that claim to kill anything that moves.

A little damage isn't likely to spell disaster for the plant, but more importantly, if you spray pesticides all over, you'll wind up killing both the good and the bad bugs. If given the chance, good bugs do a fine job of keeping the bad bugs in check.

Spraying too often and aimlessly also encourages pesticide resistance in key pests.

AND THEN you get stuck on the pesticide treadmill

14. DON'T buy praying mantids and ladybugs from retail nurseries

Mediterranean and Chinese mantids (the common egg masses sold) are not effective. They are indiscriminate generalist feeders (including being cannibalistic). And they compete with our native species

Hippodamia convergens – the commonly-sold ladybug -- is not effective. They fly away; they're migratory and it's their nature.

NOTE: there are dozens more species of ladybird beetles that ARE effective for specific garden pests. These are available through specialty beneficial insect companies. Mantids, no.

13. DON'T believe that all "Organic" pest control sprays are safe.

Some of the most dangerous chemicals we can use are natural or "organic".

Sulfur, possibly the first pest control product used by early agriculturists, is deadly.

Plant-based organic sprays such as rotenone, warfarin, sabadilla and nicotine are deadly.

And, looking at the bigger picture, using a spray of any kind for "controlling" pests is not an appropriate mind-set. First, there is no "controlling" pests; you can only "manage" them. Secondly, a reactionary approach uses up the time you should spend on figuring out what lead to the problem in the first place.

12. DON'T use “topsoil”.

First, there are no industry standards for what topsoil actually is or should be.

Second, topsoil simply put on top of native soil creates what is known as “interfacial soil tension” -- a zone is created where water has a hard time moving and where plants roots have a hard time penetrating

11. DON'T get anxious about “pH” and “acid-loving” plants.

There are VERY few plants that actually require the amount of care that gardeners give to them because they are “acid loving”.

But in the long run, here on the Central Coast, amending with peat moss* doesn't help. Oak leaves, pine leaves – as amendments -- don't help. Even sulfur doesn't help. None change the soil pH for very long.

The majority of acid-loving plants that grow here at all and still have problems simply suffer from a lack of nutrients caused by the fact that our soil pH has “locked them up” (= made it difficult for the nutrients to get into a solution).

The answer is not to change the pH -- which is almost impossible to really do.

The answer is to provide the nutrients that the plants need in a form that the plants can use. On the Central Coast, almost all plants that need “acid” do unbelievably well when fed with “citrus food”. Whether you amend or not, you will need to apply this fertilizer to these plants.

Sustainability note: such feed-needy plants do not fit the definition of “sustainability”.

* Additional problems with peat moss:

- repels water when dry
- essentially anti-biotic -- good and bad
- be aware of a rare but serious disease called SPOROTRICHOSIS --
this fungal disease can be contracted through cuts and scratches in the skin.

10. DON'T put kitchen waste into the compost pile.

Despite the fact that most people who start a compost pile do it because they think it's the best way to "recycle" greens from the house, putting kitchen waste into an outdoor compost pile is the leading cause of compost failure.

There are too many written rules and formulas for composting but there's one basic premise that holds: a compost pile must have more "brown" (carbon) than "green" (nitrogen). Green is the wet and raw stuff, simply put, and brown is the husky dry stuff. And green helps the brown stuff become actual compost.

When too much green, which kitchen waste is primarily, the composting system overloads, the oxygen level reaches an anaerobic stage, the wrong decomposers move in and the composting person ends up with wet and stinky, a yard full of flies and animals of all kinds paying a visit at night. And then the neighbors report you. Worst, you get muck instead of useable compost.

So what do you do with kitchen wastes? Put them into a vermi-composter (a worm box).

NOTE: this often happens, too, when vegetable gardeners throw too much of their left-behinds into a compost pile at any one time. The wet stuff has to be balanced with brown stuff.

9. DON'T till the soil every time you need to re-plant a seasonal flower bed or vegetable garden.

Studies have shown that once soil has been properly prepared, it's best to allow it to run its natural course for several years,

That gives the soil structure and micro- and macro-organisms a chance to settle down to the business of becoming a healthy, living growing medium.

Possibly worse, tilling also brings up buried weed seeds -- the ones you thought couldn't possibly germinate after ten years of being six inches down.

It's best to simply mulch the soil heavily between plantings and plant between the mulch come the next season.

In a new vegetable bed, however, you do need to start amending. And because you need good soil for vegetables, but it's not a good idea to work in a large quantity of soil all at once, amending ("tilling") over the course of two or three years might be necessary.

8. DON'T buy plants on impulse hoping to find a place for them in the garden later.

The number one key to successful, problem-free, sustainable gardening and landscaping is the concept of “Right Plant, Right Place”.

That means that you have a definable place – the environment. You have a distinct climate, a measurable sun exposure, a discernible soil type and a measurable space.

As a good gardener who wants a plant to survive and thrive, your job is to find a plant that matches those criteria. One that adapts to the space.

Buying a square peg for what turns out to be a round hole is, well, a recipe for failure.

... a related “MYTH” ...

7. DON'T believe that just because the nursery sells it, it must grow here.

Almost all large-scale garden centers and even most smaller independent nurseries (no longer actually that, because they don't actually grow things for you) do not buy most of their plant material from "local" or even "regional" wholesalers.

Plant material comes from all over the country. With the larger garden centers, plant materials are often distributed through a hub or, to match demand, consolidated from wholesalers who have growing grounds throughout the country.

The semi-smart retailers don't just take whatever the wholesaler wants to sell them. They often buy and sell what they think their customers want or what their customers tell them they want. That includes hostas, peonies, lilacs, sweet cherries and many other magazine cover favorites that simply don't grow here.

6. DON'T use wire baskets to prevent gopher damage.

Wire baskets placed below ground to protect trees, shrubs and the like, do not adequately keep those little animals out of the rootball. When soft chicken wire is used, the little buggers squeeze through and sometimes even bite their way through. Even when the heaviest wiring material is used (for example, “aviary hardware cloth”), gophers will climb over the wire and dig their way down into the rootball.

Worse, when heavy-gauge wire is used, roots of woody plants get choked in the wire later in their lives.

On the other hand, wire caging DOES work under raised vegetable gardens.

That's because raised vegetable gardens are, well, raised. The 12 inches of solid wall is too much for gophers to climb over.

And it's because you're working with seasonal plants – ones that don't have growing roots that would get choked in a wire barrier.

5. DON'T use Vitamin B1 (thiamine) to "prevent transplant shock" and "stimulate new root growth" when transplanting or planting trees, shrubs, roses and other plants.

A study in the 1930's provided the basis for this claim.

Pea roots cut off from the plant were placed in a culture medium in the laboratory.

The researchers knew that thiamine (B-1) was normally found in roots, so they put thiamine in the culture medium and found that root growth did occur.

Vitamin B1 is manufactured in plant leaves and sent to the roots, but if roots are cut off and placed in a Petri plate, vitamin B1 stimulates growth of the roots when it saturates the culture medium.

Planting trees and other plants in a soil environment, **HOWEVER**, is vastly different from a laboratory culture.

Several studies using intact mums, apple trees, orange trees, pine, tomato, beans, pepper, corn, pear, watermelon and squash have failed to demonstrate that vitamin B1 treatments provide any type of growth response.

Some "root stimulator" products **NOW** contain a rooting hormone and fertilizer along with vitamin B1. The vitamin B1 is for marketing purposes rather than actual effect.

4. DON'T pull weeds

AND...

Don't dig them out.

Don't chop them.

Don't expect landscape fabric to cure your weed problems (it actually leads to worse conditions).

Don't expect a decorative layer of wood chips/bark/nuggets to keep your weeds down. They don't have what it takes.

There are dozens of ways to get rid of and, more importantly, prevent weeds.

Pulling weeds causes five problems:

It creates a bit of "disturbed" soil, the perfect site for blown-about weed seeds to find haven.

It pulls up weed seeds that have been sitting deep down in your soil and places them closer to the light and warmth they need to germinate and grow.

It breaks down the desirably crumbly texture of the soil.

It disturbs the roots of nearby plants.

Most critically, it disrupts the "edaphon", the living component of the soil.

When they do get in, HOE them off if they're small enough (just seedlings) or, for medium-sized weeds, snip them off with a scissors-type pruner.

3. DO train plant roots with deep, infrequent watering

MYTH: Plant roots can find water.

The belief: no matter where you plant something, particularly a big tree, its roots will grow to where the water is.

Fact: Plant roots grow **IN** moist soil. They must have water to grow.

They do not grow where there is no moisture and they do not have some kind of “radar” or “sense” to find moisture.

Saying that plant roots “seek, look, or search for water” is speaking anthropomorphically (giving non-human things human characteristics).

In other words, plant roots grow where YOU put the water. Power, yes?

almost there...

2. DON'T install a drip system thinking you're saving water or being "sustainable".

Drip systems ("micro-irrigation") were developed to apply water quantities that are too small to have enough pressure to run traditional irrigation systems. Drip systems were invented for use on row crops (seasonal vegetables) and some fruit trees. They were not developed for landscape plantings. They were developed from an "engineering" standpoint, not a horticultural one. From an engineering standpoint, they are efficient (less water use over a given period of time). From a horticultural standpoint, they are not "effective" (they do not produce drought-tolerant plants; just the contrary).

THE ISSUES WITH DRIP IRRIGATION:

A survey of landscape professionals and homeowners had "drip irrigation" as the highest maintenance of irrigation systems; it requires constant monitoring.

Most maintenance people are not familiar with drip system repair and maintenance nor even simple scheduling – there are too many different systems.

And less familiar are home-owners.

For most efficient use, systems require pressure regulation (usually pressure reduction); a bit of information rarely shared at purchase.

Often shoddy products. (There are quality products available but that's not what people who are looking at "drip" as a cheap system are looking for.)

Products are constantly being introduced, often disappearing after a few months; failed products, hence, become hard to replace or impossible to find or repair.

Small tubing often becomes clogged from hard water and although new designs include filters and self-flushing emitters, they are costly.

Does not wash off foliage as do sprinklers. Yes, it's a good thing to occasionally wash off your plants and it does not cause diseases nor "burn" the leaves.

It's not easy to water areas with quantities of small plants, such as in newly-planted groundcovers and bedding flowers.

Because the system is black and above ground and because water remains in the main line, micro-irrigation often applies damaging hot water to young plants.

The tubing/system is unsightly.

And because it's unsightly, tubing is often covered by mulch or plant foliage, making it difficult to monitor the effectiveness of the system. Most gardeners, amateur and professional, often aren't aware of a clog in the system or other maintenance issue until the affected plants begin to show signs of stress.

Easy prey for wayward mowers and other garden tools.

Easy prey for kids and pets.

Easy prey for rodents.

Easy prey for vandalism.

Provides no cooling effect for plants during hot spells.

The vast majority of our weeds in Mediterranean climates are cool-season weeds -- the kind that come up with winter rains. Even with a drip system, we still get cool-season weeds.

Salts build up at perimeter of wetted area; such minerals aggravate most root-rot organisms.

It's often necessary to run it long to provide "deep" watering and consequently creates a long-term low-oxygen environment.

Does not push oxygen into the soil.

Because the wetted area is much smaller when delivered by drip compared to sprinklers, control is more critical in application of water to avoid plant stress.

A recent evaluation of landscape drip irrigation systems revealed an average uniformity of less than 20% (> 70% is acceptable efficiency).

One peculiar disadvantage to drip systems: gardeners often replace plants that have died at the end of a drip system tube by placing a new plant in the exact same place as the existing tube end -- regardless of the type, needs, or eventual size of the new plant.

THE WORST ISSUE (and most often overlooked):

Drip systems do not promote an extensive root system, one that is deep and wide and not shallow-rooted -- the very type of system that allows a plant to be truly drought-resistant in the long run.

The Number One Gardening Myth Is...

1. MYTH: When planting any large plant, the soil should be amended.

The belief: making the soil “fluffier” allows for better rooting.

Nothing comes closer to the idea of “standard procedure” in the gardening sciences than this old dictum.

I remember my retail garden center days and the adage we were told to pass on to customers: “a \$50 hole for a \$5 plant”.

Not only has the price of plants and amending holes changed since then -- some 30 years ago for me --

but the practice of shoveling in bags of amendment or piles of compost into a hole before planting has been discredited.

Considerable research and testing has shown that just about ALL trees, shrubs, perennials, vines, ground covers, and more

DO BETTER when planted in native, un-amended soil.

This research began in the 1970s when Carl Whitcomb, a researcher at Oklahoma State University, disproved this oft-repeated advice.

In controlled studies using percentages of different amendments (5% up to 40%), roots of ornamental trees and shrubs were consistently larger in un-amended soils.

The amendments seemed to encourage roots to stay in the vicinity of their planting holes and not grow out into the un-amended soil, leading to stunted root systems.

Whitcomb concluded that it's best to let the roots begin to grow in the native soil right away and to **use organic matter on the surface as a mulch**, rather than mixing it with the soil.

Identical research has been done at other universities since, including the UC system. All showed similar results.

Of course, good planting assumes that you have chosen the appropriate plant for your kind of soil.

Some plants like light sandy soils,

some plants like heavy clay soils,

and some plants like soils with lots of organic matter in them.

The key is to select the right plant for the right place, much as you do with shade plants and sun plants.

Fortunately, most plants are pretty tolerant of a wide range of soils.

If it's not right for the soil type, no amount of amendment in a hole will make it work.

Facts to keep in mind:

Plant roots go DEEP. Tree roots, for instance, can go 20-50 feet down. Shrub roots 10 feet or more. Tomato plants have roots down to 4 feet. Turf-type tall fescue, our most common lawn grass, can put roots down to 6 feet.

Organic matter lasts no more than two years and usually last as little as six months and no more than one year.

But there still is a place for organic matter, including those bags from the nursery or garden center.

Organic matter is a good and necessary “mulching” material after new planting. Mulch is what you put ON TOP of the soil (not INTO the soil).

Some plants DO like lots of organic matter tilled into the soil before planting:

Woodland plants, such as camellias, azaleas, ferns, and the like and

“Intense annuals” such as annual flowers and annual vegetables -- the things you plant and “harvest” after one season.

When you do use organic matter for these goodies, work it into the ENTIRE bed before planting -- don't just dig in an itty-bit for each individual plant.