

## **Basic Organic Program**

1. Stop using all synthetic fertilizers, pesticides and other chemicals that harm living organisms.
2. Build soil health with natural organic products and techniques.
3. Use native plants and well-adapted introductions to conserve water and make wise decisions.

## **SOIL AMENDING**

Apply compost, rock materials such as lava sand, granite, basalt and other paramagnetic materials and dry molasses to all planting areas.

## **MAINTENANCE**

### **MULCHING**

Mulch bare soil around all shrubs, trees, ground covers and food crops with shredded native tree trimmings to protect the soil from sunlight, wind and rain, inhibit weed germination, decrease watering needs and mediate soil temperature. Native cedar is the best choice. Other natural mulches can be used, but avoid Bermudagrass hay because of herbicide residue. Do not pile mulch on the stems of plants.

### **FERTILIZING**

Broadcast organic fertilizer to the entire site 2-3 times per year at 20 lbs. /1,000 sq. ft. Foliar feed all plants during the growing season, at least monthly with aerated compost tea or Garrett Juice.

### **WATERING**

Water only as needed. The organic program will reduce the frequency and volume of water needed. Add a tablespoon of apple cider vinegar per gallon when watering pots. Use 1 ounce of liquid humate in acid soils.

### **MOWING**

Mow turf as needed and mulch clippings into the lawn to return nutrients and organic matter to the soil. Put occasional excess clippings in compost pile. Don't ever let clippings leave the site. Do not use line trimmers around shrubs and trees. Buffalograss lawns need less care than any grass.

### **WEEDING**

Hand pull large weeds and work on soil health for overall control. Mulch all bare soil. Avoid all synthetic herbicides, such as pre-emergents, broad-leaf treatments, soil sterilants and especially the SU (sulfonylurea) herbicides such as Manage and Oust. Spray weeds as needed with vinegar based herbicides.

### **PRUNING**

Remove dead, diseased and conflicting limbs. Do not over prune. Do not make flush cuts. Leave the branch collars intact. Do not paint cuts. For more details see [www.DirtDoctor.com](http://www.DirtDoctor.com).

### **INSECT PESTS**

In general, control insect pests by encouraging beneficial insects and spraying with compost tea mixtures such as Garrett Juice. Avoid all pyrethrum products, especially those containing pipernyl butoxide (PBO), petroleum distillates and other contaminants

### **DISEASES**

Most diseases such as black spot, brown patch, powdery mildew and other fungal problems are controlled by prevention through soil improvement, avoidance of high-nitrogen fertilizers and proper watering. Outbreaks can be stopped with sprays of potassium bicarbonate, cornmeal juice, diluted milk.

## PLANTING

### BEDS

Scrape away existing grass and weeds; add compost, lava sand, organic fertilizer, wheat bran, expanded shale, cornmeal and dry molasses and till into the native soil. Excavation of natural soil and additional ingredients such as concrete sand, peat moss, foreign soil and pine bark should not be used. More compost is needed for shrubs and flowers than for groundcover. Add greensand to black and white soils and high-calcium lime to acid soils.

Decomposed granite and zeolite are effective for most all soils.

## PRODUCTS

### COMPOST

Compost, Nature's own living fertilizer, can be made at home or purchased ready-to-use. It can be started any time of the year in sun or shade. Anything once living can go in the compost: grass clippings, tree trimmings, food scraps, bark, sawdust, rice hulls, weeds, nut hulls and animal manure. Mix the ingredients together and simply pile the material on the ground. The best mixture is 80% vegetative matter and 20% animal waste, although any mix will compost. Oxygen is a critical component. Ingredients should be a mix of coarse and fine-textured material to promote air circulation through the pile. Turn the pile as time allows to speed up the process. Another critical component is water. A compost pile should be roughly the moisture of a squeezed-out sponge to help the living organisms thrive and work their magic. Compost is ready to use as a soil amendment when the ingredients are no longer identifiable. The color will be dark brown; the texture soft and crumbly and it will smell like the forest floor. Rough, unfinished compost can be used as topdressing mulch around all plantings. Add dry molasses to piles that aren't heating up enough.

### COMPOST TEA

Compost tea is made by soaking compost in water. Fill any container half full of compost and finish filling with water. Let the mix sit 24 hours, then dilute and spray on the foliage of any and all plants. Be sure to strain the solids out with old pantyhose, cheesecloth or floating row cover material. Full strength tea makes an excellent fire ant mound drench when mixed with 2 oz. molasses and 2 oz. orange oil per gallon. Add vinegar, molasses and seaweed to make Garrett Juice. Use an aquarium pump to aerate the compost tea mixture prior to using for better results

## EarthKind Roses

**'Caldwell Pink'** – A compact found rose discovered in Caldwell, Texas. This is an ever-blooming variety with double lilac-pink flowers that form dense clusters. The plants have both attractive flowers and foliage. Ht x Wd: 4 x 4 ft.

**'Katy Road Pink'** – A found rose with pink semi-double fragrant blooms. The flowers are very large and impressive. Ht x Wd: 6 x 5 ft.

**'Belinda's Dream'** – A compact shrub rose that was introduced in 1992. Produces lots of blooms that look like a classic cut-flower rose with a petal count 100+. Plants are tolerant of powdery mildew with some minor foliage drop in early spring to black spot. Ht. x Wd: 5 x 5 ft.

**'Sea Foam'** – A shrub rose that was introduced in 1964. This rose grows as a trailer or mannerly climber. The double blooms are ivory in color and fragrant. It is a vigorous grower. Ht x Wd: 3 x 6 ft.

**'Knock Out'** – A compact shrub rose with bright cherry red, semi-double blooms. This is a very striking rose in the landscape. Plants bloom continuously from spring until frost. 'Knock Out' also has beautiful glossy dark green foliage. Very disease tolerant. Ht x Wd: 4 x 4 ft.

**'Mutabilis'** - A large China rose that was introduced prior to 1894. The single open blooms darken with age from yellow to orange, pink and then crimson. The multi-colored effect is beautiful in the landscape. 'Mutabilis' has good foliage color and resistance to powdery mildew. Ht x Wd: 6 x 6 ft.

**'Marie Daly'** – A polyantha rose that is a sport of the older variety 'Marie Pavie', which was introduced

in 1888. The small double blooms are produced in clusters and have a sweet scent. Low incidence of powdery mildew and black spot in early spring. Ht x Wd: 3 x 3 ft.

**'Perle D' Or'** – A compact polyantha rose with peachy pink pompon blooms that are fragrant. The color is unique and plants are ever-blooming. Plants also have attractive glossy foliage. Ht. x Wd.: 4 x 4 ft.

**'The Fairy'** – A polyantha rose that was introduced in 1932. This rose is a good summer bloomer. Plants produce sprays of small, double pink blooms. Flowers tend to be a darker pink in cooler temperatures, and then fade to a pale pink in the heat of the summer. Ht x Wd: 3 x 3 ft.

**'Climbing Pinkie'** – A large, vigorous polyantha rose that was introduced in 1952. A nearly thornless climber that grows with or without support. Plants produce semi-double light-pink flowers with a long blooming period. Ht X Wd: 6-7 ft shrub, 8-12 ft climber.

**'Else Poulson'** - A floribunda rose with pink, semi-double blooms. Plants have a low incidence of powdery mildew in early spring. Ht x Wd: 5 x 5 ft.

*(Early publicity on the EarthKind roses also listed 'Livin' Easy' and 'Easy Going', but these two varieties were subsequently removed from the EarthKind list.)*

## Fertilizing

Organic fertilizer should be applied three times a year; late winter or early spring, early summer and fall. Apply an organic fertilizer to all turf and planting beds at 20 lbs/1000 sq. ft. Repeat every 60 to 90 days during the growing season if greater response is needed. Apply rock powders annually at about 40-80 lbs/1,000 sq. ft. The best choices include lava sand, basalt, and other volcanic materials. This is not necessary if you have volcanic soil. Add bat guano, fish meal, kelp meal or earthworm castings at 10-20 lbs/1,000 sq. ft. to annuals and perennials in the spring and every 60-90 days (if needed) during the growing season. Add a small handful of earthworm castings or soft rock phosphate to each hole when planting bulbs or small transplants. Mist or soak bulbs or seeds before planting in a 1%-5% solution of seaweed, Garrett Juice, aerated compost or some other natural biostimulant.

One of the many advantages of the natural organic program is that fertilizer can be applied any month of the year. One of the best choices is corn gluten meal. Cornmeal is primarily a fungal disease fighter although it has mild fertilizer value. Some of our recent evidence based results indicates that CGM also has disease control value. Use the CGM product at 20 lbs per 1000 sq ft and the cornmeal at least twice that rate.

## Fly Control

I've seen the use of water in a plastic bag as a fly repellent for over a year and it seems to be growing in use. What an "expert" from my area claimed was that the fly mistook the bag as a large spider web. Something about the way the water bulging in a clear plastic bag causes a prism effect and confuses the fly. Who knows what a fly thinks. Maybe they just don't feel comfortable flying around a place that hangs up bags of water.

This technique must really work. I've received dozens of similar reports on hanging clear plastic bags of water and completely eliminating fly problems.

## HOW TO PLANT TREES PROPERLY

People don't grow trees. Trees grow in spite of people. For the most part, trees are tough, durable and easy to plant and transplant if treated in a sensible and natural way.

To plant any tree (shade, fruit, big, little, native or introduced) here's the plan:

1. **Dig A Wide Ugly Hole.** Dig a very wide, rough-sided hole, 3 to 4 times wider than the tree ball, especially at the soil surface. Square-shaped holes also work. The point is to prevent the roots from circling in the hole. Do not dig small, smooth-sided holes in other words. The width of the bottom of the hole isn't important, but the depth of the hole should be exactly the same as the height of the ball. Measure – don't guess. It's better to dig a little shallow rather than too deep. If a little bit of the ball is sticking out of the ground after planting, that's okay, but when you over dig and have to put backfill under the ball, the tree can settle and drown. If you set the ball too low in the first place, that can be even worse.

2. **Run a Perk Test** - When time allows, dig the hole and then before planting fill the hole with water. Only plant the next day if the water has drained from the hole.

3. **Treat the Root System** – Container-grown trees often have root-bound balls. If so, rip the outer edge, tear the roots loose and don't worry about hurting the tree. Ball and burlapped trees don't need this treatment. Not only do tightly bound roots have great difficulty breaking away and growing into the surrounding soil, they also prevent moisture from getting into the rootball.

4. **Backfill with Existing Soil.** Backfill with nothing except soil that came out of the hole. No bark, no peat moss, no compost, no foreign soil, and no fertilizer goes into the backfill. If the backfill is softer than the surrounding soil a "pot effect" is created in the ground which makes properly watering difficult and encourages roots to circle in the hole. Circling roots can eventually kill the tree. Settle the soil with water – don't tamp. No feet, 2x4s or anything else. Simply let the weight of water settle the soil naturally.

5. **Mulch the Top of the Ball.** After the backfill is settled and leveled with the surrounding grade, cover the disturbed area with a 1-inch layer of a 50/50 mix of compost and lava sand. Any volcanic rock material can be used if lava sand isn't available and earthworm casting can substitute for the compost. In fact, earthworm casting is a high quality form of compost. Finally, add a 3-inch or greater layer of shredded tree trimmings. Native cedar is the best choice.

6. **Do Not Wrap or Stake.** The ill-advised technique of staking trees was probably started years ago by those who planted bare-rooted trees and mistakenly put soft potting soil in the hole as backfill. Wrapping material around tree trunks probably got started because it looked important. Landscape contractors have admitted to me that brown paper wrap, tree stakes and guy wires and even the troublesome watering rings are added to newly planted trees for no other reason than to impress the homeowner. Never mind the fact that all these additions are detrimental to the young trees.

Tree staking with wires, ropes or cables cuts into the bark or at least crushes the cambium layer (even if rubber hoses are used) and causes stress and long term injury. Staking also prevents the natural movement of the tree in the wind which prevents the development of trunk caliper and trunk strength.

I have asked many people, including contractors, landscape architects and others, what is the purpose of wrapping gauze, paper, cardboard or burlap around the trunks of newly planted trees. The answers range all over the place, but include protection from insects, diseases, lawn mowers and weed eater damage and sunburn. Some tree wrappers admit that the only reason is that everyone does it. Look at the bark under some tree wrapping that's been in place a while you'll see that the cover actually encourages and protects insects and diseases and causes weak, shriveled bark – just like leaving a bandage on your finger too long. The only possible reason to wrap tree trunks is the rare possibility of sunburn to the trunks of thin-barked trees. If you're worried about that, use a white wash of ½ white latex paint and ½ water. The tree will grow it off naturally. *Tree Trunk Goop* could also be used.

Trees planted properly don't need the stakes, the wrapping, or the expense.

7. **Do Not Build Water Dikes.** If you plant your trees correctly, these things aren't necessary. Supposedly these water ring dike things form a dish that makes watering more efficient. Problem with that thought process is that when trees are backfilled with the existing native soil and a thick layer (3 to 5 inches) of mulch is tossed down on top of the disturbed area, moisture will stay in the root zone for a long time without the cost or inconvenience of the watering rings. If you build water rings around the trees, you have to tear them down at some point or you'll have "watering bumps" around your trees forever.

8. **Do Not Cut Back The Top.** Thinning out the top of transplants and new trees is another old time procedure that just doesn't make sense. Alleged experts still recommend cutting away as much as 50% of the top growth to

compensate for root loss. I've planted lots of trees, including fruit trees, and they always establish and start to grow better when all of the limbs are left on the tree. Dr. Carl Whitcomb has proven this with his plant research. See the Appendix for information on his books and research. Trees need foliage to collect sunlight, manufacture food and grow. There are two exceptions in Texas – live oaks and yaupons transplanted from the wild. They do respond positively to a thinning of about 40% of the top. Why? Don't know. Haven't figured it out yet.

## **Weeding**

Hand-pull large weeds, mulch all bare soil and work on soil health for overall control. Avoid the toxic chemical herbicides, especially pre-emergent types and those that contain 2,4-D.

Use 10% (100 grain) vinegar or stronger at full strength and/or citrus oil as effective organic herbicides on hot days. Be sure to clean vinegar thoroughly out of metal spray parts, it is very corrosive.

Use "The Weeder" or "Lawn Claw" for mechanical weed removal. Apply corn gluten meal in the Spring and Fall to control annual weeds such as grass burrs. Avoid all SU herbicides and those containing Picloram.