Shade tomatoes, peppers and cucumbers

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Website of Interest:
http://www.cdsn.org/images/SNRPCRegionalPlantList063011.pdf

The link is to a list of plants that can be adapted to our desert environment. The list is adequate for use in new developments and in retrofits to existing developments.

Desert Favorite  By Master Gardener Andrea Meckley

In Southwest landscapes plants that give shade during our hot summer days are a welcome relief to us humans and wildlife. One good example is the Carob tree (*Seratonia siliqua*) which is an evergreen, multi or single trunk tree maturing about 35’ high x 25’ wide. Trained by pruning lower branches, this plant will grow into a medium sized tree with a dense, dark green canopy. New growth normally sprouts from the base and needs to be removed or plant will revert back to a bush. Originally from the Mediterranean region, Carob tree is considered a low to medium water user preferring well-draining soil. Thriving in all day to half day sun, this plant can also take the cold down to 18 degrees F. Small red flowers in spring on female trees produce one foot long flattened dark brown pods. The seeds can be eaten right out of the seed pod or can be used to make a number of things such as a chocolate substitute, molasses, animal fodder, alcohol, and more. Carob pods were an important source of sugar before sugarcane and sugar beets became widely available. The seeds and pods can be a maintenance issue. Another caution is to plant where it has room to grow since roots have been reported to break cement. We can thank the Spanish missionaries for introducing the Carob into Mexico and Southern California. In 1856 8,000 seedlings were brought in from Spain and were distributed in the southern states and more seeds came from Israel in 1859. Carob tree is a proven hardy plant for southwest desert landscapes and is a good candidate for use as a medium sized evergreen tree.
Companion Planting

Researchers attempted to grow chili seeds in the presence or absence of other plants. In the absence of a neighboring plant, germination rates were very low, but when the plants were able to openly communicate with the seeds more seedlings grew. However, when the seeds were separated from the other plants with black plastic, so that they could not be influenced by either light or chemical signals, they germinated as though they could still communicate with the other plant. A partial response was seen for fully grown chili plants blocked from known communication with the seeds. This may involve acoustic signals generated using nanomechanical oscillations from inside the cell which allow rapid communication between nearby plants.

Uncommon Beneficial’s

Beneficial Nematodes are live microscopic organisms that occur naturally in soil throughout the world. They are parasitic to insect pests that typically have a developing (larval or pupal) stage of life in the soil; however, they have been known to also parasitize above ground stages of adults, nymphs and larvae. To use them you water your garden, and then mix the packet of live nematodes with cool distilled water according to the directions on the package. Pour the solution into a sprayer or watering can and apply it to the soil.

Beneficial Microbes include fungi, bacteria and viruses. Soil microbes (bacteria and fungi) are essential for decomposing organic matter and recycling old plant material. Some soil bacteria and fungi form relationships with plant roots that provide important nutrients like nitrogen or phosphorus. Fungi can colonize upper parts of plants and provide many benefits, including drought tolerance, heat tolerance, resistance to insects and resistance to plant diseases. Microbes will also breakdown salts into bio available nutrients and remEDIATE toxins present in soil and water.

August Reminders

1. Plan for fall vegetable and flower planting.
2. Be on the lookout for whiteflies!
3. Pecans need extra water this month.
4. Do not fertilize perennials this month.
5. There is still time to plant melons.
6. Raise the mowing height to 2.5 to 3 inches.
7. Fertilize citrus, grapes and strawberries this month.
8. Water cactus deep this month.
9. Apply iron to lawns per package instructions.
10. Lift Dutch Iris and let dry rest for eight weeks.
11. Watch for beetles on fig trees this month.
12. Watch for wilting in trees. This could be a sign of Texas root rot.

Homemade Organic Grass-Based Fertilizer

Grass-Based Fertilizer is rich in nitrogen, oxygen and phosphorus. Caution: Be careful not to use grass treated with herbicides.

1. Fill a 5 gallon bucket 2/3 of the way full with fresh grass clippings.
2. Fill with water to a few inches below the top.
3. Let it sit and steep at room temperature for 3 days, making sure to stir it once a day.
4. Strain the liquid off.
5. Dilute the “tea” with equal parts water.

Fertilizer the soil or use with a foliar sprayer and spray the leaves. The recipe is perfect for fertilizing your lawn or any other high nitrogen loving plant.

Upcoming Volunteer Opportunities:
- Veggies by the Season Classes
- MG Meetings
- Newsletter Article
- Yard clean-up at UNCE

Companion Planting

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August Planting

<table>
<thead>
<tr>
<th>Basil</th>
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<tbody>
<tr>
<td>Beans</td>
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<td>Onions</td>
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<tr>
<td>Beets</td>
<td>Collards</td>
<td>Parsley</td>
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<tr>
<td>Black-eyed peas</td>
<td>Corn</td>
<td>Spinach</td>
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<tr>
<td>Bok Choy</td>
<td>Cucumbers</td>
<td>Squash, winter</td>
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<tr>
<td>Broccoli</td>
<td>Greens</td>
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<tr>
<td>Brussels sprouts</td>
<td>Kale</td>
<td>Tomatillos</td>
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<tr>
<td>Cabbage</td>
<td>Kohlrabi</td>
<td>Tomatoes</td>
</tr>
</tbody>
</table>

You know you’re a Master Gardener if you don’t have any dress shoes, just eight pairs of garden shoes.

Compost Tea Recipe

The goal in making a compost tea is to cook the compost until the bacteria has multiplied to a beneficial state. The most common method is to use an aquarium air pump to disperse oxygen into the concoction in order to stimulate the growth of the soil bacteria.

**Supplies and equipment:**
- Aquarium pump sufficient to power air to three air stones
- Three-way valve
- Six to eight feet of aquarium tubing
- Two or three air stones, which are pumice stones with perforated holes along the top for the release of air bubbles

In addition to the aquarium supplies you also need:
- Two five-gallon plastic buckets or containers
- Five gallons of non-chlorinated water.
- One package of cheesecloth for straining the finished tea.
- Compost that has completed its decomposition cycle and is ready to be used.
- For best results also add one to two ounces of unsulfured organic molasses, which will feed the bacteria. You'll need to stir the tea two to three times a day.

**Setting up your brewer:**
- **Step One:** Take the aquarium air stones and place them flat in the bottom of the bucket and attach three equal lengths of tubing. Connect the tubing to each air stone and the 3-way valve. Make sure to leave enough tubing to use for connecting the valve to the pump. You want to set the pump on a level surface to ensure it works properly.
- **Step Two:** Place the compost into the 5-gallon bucket. Most people fill the bucket half way, while a few prefer to use only enough to cover the stones. Either will work, but the more compost you use, the stronger your tea will be.
- **Step Three:** Fill the bucket with water until it's about two to three inches from the rim. Add molasses if desired.
- **Step Four:** Cook the compost by leaving the air pump running 24 hours a day for at least three days.
- **Step Five:** Once your compost tea is ready, strain it through cheesecloth into another five-gallon bucket and begin using the tea immediately. You can use a watering can or a sprayer.

**Organic Pest Control**

**Spider Mites** – Mix together 2 tablespoons fish emulsion per 1 gallon of water. Spray on plants. This mixture is an excellent fertilizer, also.

**Borers** – Tobacco spray – Soak a handful of natural tobacco in 1 gallon of warm water for 24 hours. Strain and spray tree trunks. By placing the tobacco into an old nylon stocking (for soaking) it may not be necessary to strain the mixture.

**Cockroaches** – Baits are very important for cockroach control because a cockroach will eat the feces of poisoned roaches and will also eat the dead poisoned cockroach.

**Boric Balls** – Mix 1 cup boric acid, 1 cup flour and 1/2 cup sugar. Add water to moisten, and roll into cakes or balls and place where pests will eat, but children and pets will not.
Landscape Tips to Get Through Summer Drought

Keeping your gardens and landscapes living and healthy during extended periods of drought during the summer months can be challenging, but not impossible! From proper watering, mulching, choosing drought tolerant plants and using many other techniques you can ensure your vegetable and perennial gardens, trees and shrubs and your lawn can make it through dry periods and maintain their health and vigor. Below are some techniques, steps, and suggestions to prepare and maintain your gardens when Mother Nature creates a summer drought.

Watering

In many communities, the summer months bring water restrictions; total water bans, odd/even watering and voluntary conservation methods. In those areas where limited watering is allowed doing infrequent, deep watering of those plants that need water - vegetable gardens, newly planted trees and shrubs and drought affected plants and annuals - will be the preferred technique. If a lawn is an established one (and not a newly sodded one) it can go dormant, turn brown and recover when cooler temperatures return in September. Unfortunately, a newly sodded lawn will not survive more than a few days without water during a drought.

Plant selection

Choosing plants that are tolerant of droughts and limited watering during the summer will be a design option, especially if your community experiences water bans on a regular basis. Sample list of drought tolerant plants can be found here.

Lawn Care

During periods of drought stress mow your lawn 3” or higher to help shade the roots, water infrequently (or when you are allowed to) and deeply to encourage the roots to penetrate deeply into the soil. Refrain from fertilizing your lawn during the summer months (its natural cycle is to slow down during the summer) and begin to actively grow again in the fall.

Applications of compost teas

An organic technique is to apply compost tea (see recipe above) that adds living microbes to the gardens, planting beds and lawn while also adding moisture to the landscape. Typically, an application would be made in the morning or later in the day on an overcast day to help keep the microbes, bacteria, and fungal organisms alive as they are distributed to landscape.
**Mulching**

Applying mulches to your gardens, beds and plantings will help to maintain the moisture in the ground, moderate soil temperatures and prevent weeds from growing. A good quality shredded pine bark mulch, clean cut straw, newspapers, pine needles and other natural and organic mulches will help to significantly reduce the amount of water that escapes due to evaporation...reducing the need for frequent watering.

**Repairing leaky hoses and faucets**

You would be amazed how many gallons of precious water can be lost through leaks in the hose or a faucet that does not shut off completely. Have a supply of washers on hand for faucets and hoses to make them water tight!

**Drip irrigation**

One of the most efficient ways to water plants in gardens, planters and window boxes is to install a drip irrigation system. Through emitters, drip irrigation lets small amounts of water drip onto the base of plants (where it penetrates into the roots) with minimal evaporation and under low pressure. Once the area around the plant is moist the drip system will be able to easily maintain the water needs of the plants...without wasting water by above ground irrigation.

**Collect roof runoff**

By installing rain barrels, you can catch water running off your home and shed roofs and using the collected water during drought periods. Be sure to have a top for the barrel so as not to create a mosquito breeding area. Screens on the end of the downspout will also help keep roof shingle particles out of the container.

**Prepare your landscape before the summer droughts appear**

Taking steps to prepare your garden beds and lawn before summer will help it survive the drought. Water your lawn infrequently but deeply during the late spring and early summer to allow the roots to grow deep into the soil...giving them a better chance to deal with summer heat and lack of water. Fertilize and top-dress with compost to help keep the grass plant healthy and the soil capable of holding water - preparing it for summer stresses. Mulch the beds, fix hoses and faucets before summer arrives. Choose drought tolerant plants for new gardens or replacements.

“**All the water that will ever be is, right now.”**

National Geographic, October, 1993.
Schedule zone start times five minutes apart and water between 9 a.m. and 11 a.m. This is only a guide. The actual amount of time you water may vary due to different types of sprinklers, soil and weather. The goal is to water 2-3 inches deep with no run-off. It is better to water a lesser amount more often than a larger amount less often. Follow the link for tips on Bermuda grass maintenance and instructions on how to perform a “Tuna Can Test” to see how much water your grass is receiving.

<table>
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<th>Warm Season (Bermuda)</th>
<th>Cool Season (Fescue)</th>
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*Only water as needed