



J&L's Gardening Handouts

Tips and Suggestions for Year Round Gardening

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Tomato Care

Nothing tastes better than fresh, home-grown tomatoes. Plump, juicy and nutritious, garden-fresh tomatoes are a delightful, healthy treat. No vegetable garden is complete without them. While growing tomatoes isn't too difficult, these delicious veggies do require specific care for their success.

Since tomatoes are America's favorite garden vegetable, it's no surprise that there are hundreds of varieties to choose from. Home garden tomatoes range from bite-size currant, cherry, and grape tomatoes to huge beefsteak fruits, in nearly every color; red, orange, yellow, black, purple, striped, and even multi-color. Discovering which tomato varieties are best for you and your garden will involve some experimenting.

Take a look at some of the key needs of tomato plants. Caring for tomato plants does take some time and a little effort, but it ensures good yields of healthy tomatoes for you and your family. Not a bad deal.



Apply two pounds of either **Dr. Earth Vegetable Garden Food** or **6-10-4 Vegetable and Flower Fertilizer** per 100 square feet. Repeat in 6 to 8 weeks.



Spread one inch of **Bumper Crop, Fertimulch**, or "**well-rotted**" compost over the soil. Do not use fresh manure; it can rob nutrients from the soil and may cause blossom-end rot. Rototill the soil thoroughly.

Plant tomato plants on an angle; not straight down. Bury tomato plants shallow, but only leave three or four inches of the stem out of the ground. The buried stems will produce roots.



Be sure to remove all leaves from any buried stems.

Water immediately after planting. Water them again with a mixture of water and **Fertilome Blooming and Rooting Fertilizer**. Repeat the application of this liquid fertilizer weekly during the first month.

Protect your plants from the sun and from hot winds until your plants have acclimatized: at least a week. You can use an old pot or a piece of cardboard around the plants for protection against the sun and wind.

Protect your young plants from frost, especially if you plant them in April or early-May.

A **Hot Cap** will protect a plant from a mild frost, while a **Season Starter** or a **Wall of Water** will protect a tomato plant to about 16 degrees. Be sure to set up your **Wall of Water** at least 5 days before planting; to help warm the soil.



Watering

Water consistently but not constantly. Tomatoes prefer well-drained soil and deep irrigation. Tomatoes do not like sprinkling. It is important to keep tomato plant stems and leaves as dry as possible. If airborne diseases land on wet tomato leaves, your tomato plant may become infected. Water the soil surrounding your tomato plants, but avoid wetting the tomato plants themselves. Try to water deeply once a week during the hot, dry weather.

Tomatoes do not like too much water, especially late in

the season when they should start to ripen. Too much water will delay ripening. Too much water, late in the season, may also cause the fruit to split or 'crack'.

Tomato Tip: To help tomatoes ripen faster in the fall, let the soil dry out a little, when the tomatoes start to mature and turn pink.

Fertilizer

Do not over-fertilize tomatoes later during the summer and fall. Too much fertilizer in the late-summer promotes plant growth, at the expense of fruit production. Tomatoes do not need much fertilizer after the first two months. If needed, fertilize them once or twice a month with **Fertilome Blooming and Rooting Fertilizer** to help the plants grow faster and to help increase fruit production.



Staking

Tomatoes can grow to be 5-8 feet high, or even taller. They have no natural way to hold themselves up. If left on their own, tomatoes will vine along the ground. Staking provides the support they need to produce more fruit and healthier plants.



There are probably more methods for growing and staking tomatoes than any other vegetable. Tomatoes can be trained to a trellis, caged, allowed to sprawl over the ground, tied to stakes, grown in hanging baskets, and planted in containers.



Staking tomato plants is not a necessity. It does, however, help keep the fruit clean, and safe from slugs and snails. It also helps improve air circulation that can help prevent some airborne diseases.

Using tomato cages or stakes also helps conserve space and is a great option for gardeners with a limited growing space.

Rotate Your Garden

Alternate your tomato bed between at least two spots. You will reduce the risk of soil-borne diseases such as bacterial spot, verticillium wilt, fusarium, and early blight. Please read our **Crop**



Rotation Information Sheet for more informa-

tion about this extremely important task.

Squash, cucumbers, melons, eggplant, okra, tomatoes and other vegetables in your garden depend on bees to set fruit, so plant some insurance with flowers that will attract them. Bee balm and marigolds are some of their favorites. As soon as the weather is dependably warm and sunny, you should see the bees visiting your plants. Please read our **Companion Planting Information Sheet** for more information.



Common Tomato Problems

Blossom End Rot. Blossom-end rot is a dark, sunken area on the blossom end of the tomato. This problem is not a disease, it is a physiological problem within the plant. Blossom-end rot is caused by a calcium deficiency. Stress (too much or too little water) can create the calcium deficiency within the plant. Keeping tomato plants consistently moist, not too wet or very dry, helps to prevent this problem. Adding gypsum (calcium) may also help. If your tomatoes do have blossom end rot, you can still eat them. Just remove the bad portion and eat the rest.



If your tomatoes 'always-have-blossom-end-rot' or they 'just-don't-grow', try adding two tablespoons of **Epsom Salt** and four tablespoons of **Gypsum** around each plant when you first plant your tomatoes in the spring. You will be pleased with the results.



Blossom Drop This problem is usually caused when either the **night temperatures are too cold** (stay below 55° F) or the **night temperatures are too hot** (stay above 75° F). This problem can also be caused by too much Nitrogen or water. Tomatoes set fruit when night temperatures stay between 55 degrees and 75 degrees.

Use either **Bonide Blossom Set** or **Fertilome Pepper & Tomato Set** if the blossoms do not set fruit when they should, especially during the hot summer weather. Tomatoes rarely drop their flowers for an extended period of time. It is usually just a problem during June and July. Unfortunately, that is the time the tomatoes need to set fruit so the tomatoes have time to ripen before it gets too late in the fall.



Cracking Both radial cracking (from the stem downward) and concentric cracking (around the stem) is caused when the plant takes up too much water too quickly. As tomatoes begin ripening, their skin becomes less flexible.



Uneven watering, or extra water following a dry period, encourages the plant to absorb water too quickly. This causes cracking in a radical direction. Later in the season, cool nights, combined with uneven moisture, will cause the concentric cracking.

Early Blight. This fungus disease is generally one of the most severe tomato problems faced by home gardeners each season. Early blight shows up as a leaf blight on the lower part of plants. It is worse when wet weather is experienced soon after transplants are set out (**One Reason Not To Sprinkle Tomatoes**).



The disease moves upward, and by early to mid-summer, early blight has caused a "firing-up" of foliage over most of the tomato plants in the garden. As the disease progresses, leaves turn yellow, wither, and drop from plants. Early blight control is based on crop rotation, removal and destruction of crop debris from previous crops, staking, mulching, and timely application of fungicides.



Late Blight. Late blight is a plant disease that mainly attacks potatoes and tomatoes, although it can sometimes be found in other plants. Late blight lesions can occur on both leaves and stems. The first appearance of lesions commonly occurs after periods of wet



weather (**One Reason Not To Sprinkle Tomatoes**).

Black lesions appear within 3-7 days of infection of leaves. On tomato fruit, late blight causes a firm, dark, greasy looking lesion from which the pathogen spore producing structures emerge under humid conditions. Tomatoes and potatoes are susceptible to late blight at any time during the growing season.



Infection only occurs when the leaves are wet. If the growing season is wet, and late blight is present, fungicides will be necessary to protect your plants from infection. A continuous fungicide coverage is necessary to protect plants from infection. Check your tomatoes for symptoms of late blight each week.

Powdery Mildew. This is a common disease affecting many plants, including tomato plants. This mildew can be caused by many types of fungi that do not require high humidity. This makes it more prevalent than many other plant diseases.



A powdery mildew infection develops when wind borne spores land on plant tissues. A combination of shady conditions and warm weather (especially at night) favor the development and formation of the fungi.

Powdery mildew symptoms on tomatoes are different than on most other plants. Most plants have white, chalky spots that form and spread over the entire plant. On tomatoes, the first symptoms occur on lower leaves as bright yellow spots that range from 1/8 to 1/2 inch in diameter. The spots enlarge and eventually turn brown. As infections progress, the entire leaf withers and dies. There are no symptoms on the stem or on the fruit.

The best treatment for powdery mildew is prevention. Full-sun conditions and high temperatures will hinder its growth and spread. Providing proper air circulation around the tomato plants, allowing for adequate spacing in the garden, and avoiding overhead sprinkling also work as preventive measures.

If these measures fail, then fungicides are available for control. Fungicides can be used both to prevent and to destroy an infection. The least toxic of the fungicides include Serenade, Neem oil, horticultural oil, and sulfur. However, you have to be careful using them in hot and dry weather conditions, they can burn the leaves. Chemical fungicides also work well, just read the label to find out how long to wait after application, before you can harvest the fruit.

Disease Resistance

Many hybrid tomato varieties are bred specifically to resist particular diseases. Plant disease-resistant varieties to have the healthiest crop possible. The letters by each variety indicate that it is resistant to a particular disease.



V - Resistant to Verticillium

F - Resistant to Fusarium

N - Resistant to Nematodes

T - Resistant to Tobacco Mosaic Virus

A - Resistant to Alternaria

If you already have any of these diseases in your soil, then you must plant varieties that are resistant to them. There are no chemical controls for these diseases, and it takes several years to control these diseases organically; by using crop rotation and solarization.

Unfortunately, most Heirloom tomatoes are not resistant to any of the soil diseases. In addition, many may suffer from cracking and cat facing problems. If you can tolerate these problems, many heirloom varieties have a taste of the own, and are worth the risk.

Please read our '**Crop Rotation**' and '**Soil Solarization**' **Information Sheets** for more information.

Definitions

Hybrid - Varieties that combine traits from two different varieties to produce a new variety, with traits from both parents. Their seeds cannot be harvested and replanted with the same results.

Heirloom - Open-pollinated varieties introduced before 1940,

or varieties more than 50 years old. You can save and replant their seed. They often have unique flavors, but are not always as productive.

Determinate - The plant grows to a determined height; growth stops when they start flowering. They don't need staking, but putting them in a cage is still very beneficial. The fruit usually ripens within about a 2 to 3 week period. Most commercial growers use these varieties for easy harvest.



Indeterminate - The plant continues to grow all summer; to an *'in-determined size'*. Plants can reach a height of 6' to 8' tall, if they are staked. They produce flowers and fruit for an extended time; until the frost kills them in the fall.

Pruning

Pruning is not necessary, but it can enhance production. If you want taller plants, earlier harvest, or larger fruit, you should remove unwanted sucker-stems that start to form, especially those that start later in the season. Sucker-stems are the new branches that grow out of the tomato's main stem, just above a leaf.



Never prune a 'determinate' type tomato. You want all the fruit you can get from these shorter plants.

Indeterminate varieties vary in their response to pruning: some have increased yields when the young plant is pruned back to three or four main stems; others produce better with more stems.

Suckers near the bottom of the plant are stronger than those near the top. Remove unwanted suckers in the bottom 10" of the plant to allow greater air flow at the base of the plants to help prevent diseases, and to reduce the risk that fruit will touch the ground.

Suckers that emerge later in the season are usually weak, produce inferior fruit, and drain away energy from the main stem.

As a tomato plant matures, its lower leaves begin to yellow. Pinch or prune yellowed leaves to prevent disease, to help improve the tomato plant's appearance, and to help the plant keep its energy focused on fruit production.

Don't over-prune. If you grow tomatoes in an area that is hot, be careful not to 'over-prune'. Too much direct sunlight or steady, intense sunlight, can cause tomatoes to develop sunscald. Tomatoes need leaves to protect their fruit.



Tomato Tip: Removing new flowers near the end of the growing season can help speed up the ripening of mature fruit.

Harvesting

The perfect tomato for picking will still be firm, regardless of size, with perhaps some yellow remaining around the stem. A ripe tomato will be slightly soft, not overly soft.

Never refrigerate fresh tomatoes. Doing so spoils the flavor and texture. Store them in a cool, dry location, preferably in the dark.

To speed up ripening in the fall, let plants wilt slightly between waterings. Do not do this during the summer or you may cause blossom end rot.

Leave your tomatoes on the vine as long as possible, cover plants with a frost blanket if a frost is predicted.

At the end of the season, when a hard frost is predicted, harvest and store any green tomatoes that have started to turn dark-green. Immature, light-green tomatoes will probably just rot.

Never place tomatoes on a sunny windowsill to ripen; they may rot before they are ripe. Place them in a cool, dark place.

If your tomato plant still has fruit when the first hard frost threatens, pull up the entire plant and hang it upside down in the basement or garage. Pick tomatoes as they redden.

To freeze, core fresh unblemished tomatoes and place them whole in freezer bags or containers. Seal, label, and freeze. The skins will slip off when they defrost.

Tomato Gardening in Containers

Potted tomato plants are an option for small-space gardening because the pots can fit on a small balcony, patio and in the corner of a yard. Although most tomato plant varieties are suitable for growing in containers, those labeled "patio" or "dwarf" or "determinate" do especially well, because they are small and simple to contain.



Container-grown tomato plants require slightly different care than garden-grown tomato plants, but they can produce fruits that are just as flavorful. As with garden-grown plants, set potted tomato plants outside only after all danger of frost has passed in spring.

Container Gardening Tips



1. The larger the pot, the better. A 5-gallon pot is the smallest size that is suitable, however a 7-gallon or 10-gallon pot is even better. Make sure that the pot has at least one drainage hole in its bottom. If a pot doesn't have a bottom drainage hole, then drill a 1/2-inch diameter hole in the bottom.

2. Always use fresh Black Gold Potting Soil or Gardeners Gold Potting Soil in your containers. Do not reuse the soil from previous years. It is usually depleted of its minerals and nutrients, and, it can have soil borne tomato diseases. The older potting soil is still good, so be sure to mix it into the garden, to help improve that soil. Fill each pot with the potting soil mixture to within 2 inches of its rim. Do not ever use plain garden soil.

3. Remove each tomato seedling's lowest set of leaves. Plant one tomato seedling in each pot. Place each seedling slightly deeper in its new pot than it was in its nursery pot, so that its stem will be buried under soil up to its new lowest set of leaves.

4. Set the potted tomato plants in a warm location where they can receive six to eight hours of direct sunlight each day. A location near a south-facing wall helps reflect light and warmth onto the plants.

5. Place the plants on a tray or other waterproof container to collect draining water in their new location. Pour water onto the soil near the base of each plant, and continue to water until the excess moisture drains from the pot's bottom.

6. Water, Water and More Water (But not too Much!) The key to tomato success is to give your tomato plants a consistent amount of water, which can be the biggest challenge for growing tomatoes in pots. The goal is to keep the soil moist, not wet. Too much water and your plant's roots will rot. Too little water and your plants will get weak and your tomatoes will get blossom end rot. Too little water, and then too much water, you will have a tomato disaster.

Check your tomatoes every day. In the heat of the summer, or if it's hot and windy, you may have to water twice a day. Check the plants' soil moisture daily, and provide water when the top 1 inch of soil just begins to feel dry.

Container Watering Tip: If you cannot keep your containers evenly moist, try mixing Soil Moist Crystals in the soil before planting. Soil Moist crystals store over 200 times their weight in water. They are a super absorbent 'crystal' that traps moisture that would normally percolate past the root zones. Then, as the soil dries, the stored water is released back to plant roots. You may reduce watering your plants up to 50%. They are safe and ideal to use in all containers; flowers and vegetables.



7. Install a tomato cage, or stake, in each pot soon after planting. Put a 3- or 4-foot tall stake into each pot until it hits the bottom, and tie each tomato plant's stem to its stake loosely with plant ties every 8 inches as the plant grows. Alternatively, place a tomato plant cage over each pot to support the fruit-bearing branches.

8. Fertilize the tomato plants with Dr. Earth Root Starter Fertilizer right when you plant them. This is an excellent fertilizer that provides many beneficial micro organisms to help build a strong root system. Apply **Osmocote Slow Release Fertilizer** about 3 weeks later to provide the fertilizer for the rest of the year; every time you water you will be fertilizing your plants.



Please read our 'Growing Vegetables In Containers' and 'Container Gardening' Information Sheets for more information.

Tomato Varieties *There are hundreds to choose from.*

Acclaim 70-75 days Determinate. Extra large, firm red fruit. Excellent flavor. Good fresh or canned.

Ace 75 days VFN Determinate. Large, thick-walled, red, smooth skinned fruit. A low acid tomato which has large yields.

Amish Paste 74 Days Indeterminate. Paste tomato. Large, plum shape, meaty, thick walled fruit with few seeds.

Beefmaster 80 days VFN Indeterminate. Large fruit up to 2 lbs. Hybrid of Beefsteak.

Beefsteak 90 days VFN Indeterminate. Produce ribbed, irregular, rough fruit

Better Boy 72 days VFN Indeterminate. Large fruit for slicing. Produces heavy crop. Sturdy, thick-walled fruit,

Better Bush 72 days VFN Determinate. Large tasty fruit. Good plant for pots.

Big Beef 80 days VFN Indeterminate. Large, slicing tomato with good flavor. A variety many gardeners prefer over Beef Steak.

Big Boy 70 days Indeterminate. Thick-walled fruit. Good Slicing tomato. Very productive and delicious fruit.

Black Krim 85 days Indeterminate. Heirloom. Medium, 2 to 3 inch tomatoes. One of the sweetest tomato varieties.

Black Truffle 75 days Indeterminate. Heirloom. Deep burgundy color, with undertones of purplish-black, rich with flavor.

Brandywine 90 days Indeterminate. Heirloom. Heavy producer of big, boat-shaped, beefsteak fruits. Pink-red color, 1 to 1 1/2 lb. size.

Campbell 1327 75 days VF Determinate. Firm, medium size fruit. Resistant to cracking.

Caspian Pink Tomato 80 days Indeterminate. Russian heirloom variety. Beefsteak-type fruit. Exceptionally flavorful, 10oz tomato.

Celebrity 72 days VFNT Determinate. Good mid-season tomato. Medium to large size fruit. Excellent flavor. Recommended by USU extension. One of the best varieties for this area.

Celebration 72 days VFFT Determinate. NEW-Improved Celebrity. Has better disease resistance and improved yields. Excellent for home garden. Large red fruit with good flavor.

Champion 62 days VFN Indeterminate Solid meaty fruit. Good for sandwiches. Large 10oz fruit.

Cherokee Purple 80 days Indeterminate. Dusky-pink with dark interior color. Unmatched sweet, rich taste on sandwiches or in salads.

Christmas Grape 80 days Indeterminate. Small tomatoes in grape-like clusters. Strong, sweet flavor. High yield.

Delicious 77 days Indeterminate. Large beefsteak-type fruit. Can produce up to 2 lb fruit. Excellent flavor. Solid meat, small seed cavity

DX 52-12 60 days Determinate. Excellent flavor. Good for canning. Does not have much disease resistance. One of the most popular varieties in Utah, not well known in other areas.

Early Girl 62 days V Indeterminate. Meaty, small to medium 4 to 5oz fruit, one of the first to ripen. Good flavor. Produces continually in season.

Fantastic 70 days VF Indeterminate. High yield of smooth, medium sized fruit. Good for slicing. Crack Resistant.

Floramerica 72 days VF Determinate. Fruit is large and sets readily, in almost any weather.

Fourth Of July 54 days VFNT Indeterminate. Early season, medium to small fruit, similar size as Early Girl.

German Johnson 80 days Indeterminate. Heirloom. Great flavor, a must-have for any garden, good production, open-pollinated for seed saving.

Green Grape 65 days Determinate. Heirloom. The greenish-yellow flesh is juicy and has an excellent flavor.

Green Zebra 78 days Indeterminate. Heirloom. Exquisite green bi-colored, 2" tomato. Lime-emerald color with dark-green zebra-like stripes.

Golden Boy 80 days VFN Indeterminate. Large, yellow fruit. Good, mild flavor.

Health Kick 72 days Determinate. Great for eating fresh. Contains 50% more lycopene than other varieties.

Heartland 68 days VFN Determinate. Round red fruit on compact plants. Good for patios and containers.



Husky Gold Hybrid 70 days VF Indeterminate. Medium to large golden fruit. Thick walled and meaty. Sweet and mild flavor.

Jet Set 70 days VFNT Indeterminate. Hybrid of Jet Star. Sets fruit well. Excellent flavor.

Jet Star 72 days VF Indeterminate. Medium sized, firm, good flavor fruit. Fruit is firm and holds up well in handling.

Juliet Hybrid 60 days Indeterminate. Small, 1 to 1.5 inch, 1oz tomatoes in grape-like cluster. Very sweet flavor. High yield.

La Roma 62 days Determinate. Firm, meaty red fruit. Hybrid of Roma. Excellent canning tomato.

Legend 68 days Determinate. Large, 8oz to 1lb red fruit. Very Tasty. Good slicer with few seeds.

Lemon Boy Hybrid 72 days VFN Indeterminate. Large, 7oz yellow fruit. Very smooth, high quality tomato.

Long Keeper 78 days Indeterminate. Firm, meaty red fruit. Stores for 6-12 weeks or even longer.

Moscow 70 days V Determinate. Smooth skin, thick-walled fruit. Good for canning. Older variety, not much disease resistance.

Mortgage Lifter (heirloom) 80 days Indeterminate. Large, smooth, 1lb to 2lb pink fruit have a delicious, rich, sweet taste.

Mr Stripecy 80 days Indeterminate. Large, red and yellow striped fruit. Heirloom variety. Tasty to eat, does not can well.

Oregon Spring 65 days Determinate. One of the first to ripen, sets fruit at cool temperatures. Medium to small fruit.

Patio Tomato 70 days F Determinate. Strong, sturdy plants, great for container gardening. Small to medium, good flavored fruit.

Pineapple Tomato 85 days Indeterminate. Heirloom. Huge yellow-gold fruit often striped in red. Delicious, strong aroma and fruity aftertaste.

Red Cherry 75 days Indeterminate. Small red fruit, up to 3/4 inch. Excellent flavor. Great for salads.

Red Grape 60 F days Indeterminate. Small, oval, 1inch, tomatoes in large clusters. Very sweet flavor. Chewy with few seeds. Small but big on flavor.

Red Pear 78 days Indeterminate. Small, pear shaped tomatoes in clusters. Good fresh, in salads. Can be use for canning and in sauce.

Roma 75 days VFN Determinate. Good canning tomato. Solid meat, not particularly good for eating fresh. Common in salsa.

San Marzano 85 days VF Indeterminate. Plum-type tomatoes have sweet flavor, perfect for pasta sauce. Great chopped into salads.

Sugary Hybrid 60 days Semi-Indeterminate. Small, 1/2oz pink tomatoes in grape-like clusters. Very high sugar content. Pointed end.

Sunsugar Hybrid 62 days FT Indeterminate. Small, yellow, cherry tomatoes. Very, very sweet flavor. High yield.

Super Fantastic 70 days VFN Indeterminate. Produces all growing season. Excellent flavor. Very popular. Large smooth, great slicer.

Super Sweet 100 65 days VFN Indeterminate. Sweet, bite-sized tomatoes and great disease resistance. Perfect for snacking and for salads.

Sweet 100 VF 62 days Indeterminate. Cherry Tomato. Produces clusters of sweet fruit. Plants can grow tall. The best cherry tomato variety.

Sweet Million 65 days VFNT Indeterminate. Large grape-like clusters of smooth, sugary sweet, 1" miniature fruit arise all summer long. Plants can produce up to 500 cherry tomatoes.

Sweet Baby Girl 65 days FT Indeterminate. Small, crack resistant tomatoes. Very sweet flavor. High yield- Huge Crop. Sweeter fruits, half-sized vines. One of the best cherry tomatoes for home gardens.

Tomatillo 80 days Sweet to mildly-tart, 1" to 2" green, fruit enclosed in a papery husk. A novelty fruit to grow.

Tumbling Tom 70 days Best variety for hanging baskets, can trail 2' long. Cascades of sweet, juicy, cherry tomatoes. Heavy yielder of beautiful bright red cherry tomatoes.

Viva Italia 80 days VFN Determinate. One of the best 'Roma-type' tomatoes. High sugar content. Blocky, pear-shape fruit weighing 3 to 4 ounces. Great for canning, sauces, salsa.

Whopper 70 days VFNT Indeterminate. These big, juicy, crack-resistant tomatoes, 4 inches or more across, ripen uniformly. Up to 2 pounds.

Yellow Pear 70 days Indeterminate. Small, yellow, pear-shaped fruit. Very sweet. Great in salads. Good for pickling.

Which is the Best Variety to Grow? Good Luck Choosing!