

Tomato TALK



**“Only two things
that money can't buy . . .
True Love, and
Home Grown Tomatoes.”**

John Denver (1943 - 1997)



Skip Batchelder



About The Author



Through my many years, I have perfected my gardening skills and expanded my knowledge and experience as a gardening instructor, speaker, author, certified nursery consultant, and most recently blogger.

I was introduced to gardening at the very early age of 8. I lived across the street from a man who gardened his little slice of heaven on about 5 acres of semi-rural property in No. California. Mr. May had everything from honeybees to an orchard, and was very accommodating to the little boy from across the street. I spent hours shadowing Mr. May around his place, asking questions, making mental notes and scurrying across the street to try my hand in my parent's anemic yard. Eventually I got so good at applying Mr. May's know-how that I won the consent of my Mother to tend her flower beds; and my Dad gave me a vegetable garden plot in the corner of our backyard. I didn't know then that I was attracted to the science of the whole thing, but I could see the results and was very proud of the increase in blooms for my Mom, and the vegetable production that even I could appreciate as abundant. I was hooked.

High school and college left little time or opportunity to get in the dirt. But, I was rewarded and further encouraged by my zoology and botany classes and next tried my hand at tending a garden underneath the high porch and stairs of our apartment in No. New Jersey. It all came back to me and when we finally had our first home I had my first garden plot as an adult. Some early setbacks and a hankering to be more at-one with the earth, led me to the disciplines and sacrifices of French Bio-Intensive Organic Gardening. Yeah, I wore wing tips to work, but I had Berkenstocks in my heart as a young man in the late 70s.

Today, I live on a "rock" in Rocklin, CA and my active gardening is restricted to raised beds (even my lawn is a raised bed) and patio containers. But, I do keep up with the latest trends in gardening, the irreversible encroachment of the Government on our garden culture; and most importantly, those new to the pleasures of gardening. As a nursery consultant in the Garden Center of the world's leading home improvement store chain, I have even gained a faithful following of young adults with first home responsibilities and opportunities: and retired men and women who now have the time, focus, and inclination to finally develop a better understanding of gardening and hopes for its rewards.

Nearly every backyard patio has a charcoal or gas grill. My most recent experience in backyard cooking has been the introduction of the **Traeger Smoker / Grill** into the lives of myself and my wife Roberta. In the pages that follow we will share with you the wonders and rewards of cooking with wood . . .at home on our Patio !



Skip Batchelder





Introduction

The Tomato is nearly everyone's Love Fruit. Gardeners will complain about the cost of store bought tomatoes, but they will gladly invest a hundred dollars to secure their own supply of fresh, juicy Slicers and Cherries. Ironically, the tomato is a fruit, not a vegetable. It comes from the warm, humid climates of Mexico and Central America - not New Jersey !

With proper care, the tomato, and its cousin the pepper, are the two most popular and easiest to grow garden plants readily available to the Weekend Gardener. The tomato is famous for its adaptability to nearly any garden environment from hilly rows to raised beds to hanging upside down on the porch. Nearly everyone has the itch to plant their tomatoes as early as possible. If you take into consideration the warmer native environment of this fruit, you need only to make some basic accommodations for early season warmth and protection to get your early start.

March begins my traditional Tomato Season. I can hardly wait for my friends from Bonnie to deliver the first premium tomato seedlings ready for planting. As many know, I am known for building the tomato planting culture around **"Skip's Tomato Machine"**. The Tomato Machine is the secret to my early start and ensured success in realizing red ripe tomatoes by the end of May and full production through out the Summer and Fall.



Varieties

Tomatoes come many separate varieties.. Favorites are chosen for size, color, taste and pedigree. There are literally dozens of tomato varieties. But, to keep it simple and enjoyable let's appreciate that they are first divided into two groups of cultivars. Each cultivar has its own merits. While neither is better than the other, each type of vine can be chosen for a distinct pattern of stem growth and fruit disbursement.



Determinates

As the name implies, these varieties mature to a genetically predetermined potential height and fullness. One of my favorites, is the fairly new cherry variety, Bonnie's Husky Sweet. This bush type vine is ideal for the tomato machine with its 4 ft tall cage. If confined in a cage, mature vines (even those laden with fruit, will stay erect, keep foliage together to shelter the fruit and keep plants from leaning over and touching the ground. The cages I fabricate out of a panel of Remesh Wire cost under \$8, last for years out in the weather, and can be easily converted to other crops best supported by cages, like peppers, beans and cucumbers. The other nice thing going for determinate varieties is that they need relatively little grooming through the season.

Indeterminate

While determinate varieties are pretty straight forward, that's not so much the case for their indeterminate brethren. Indeterminate tomato vines basically grow throughout the season - many right up to the first frost. One of my favorites in the Tomato Machine is the tried and true Early Girl. I like this variety because it will grow up, over and down again on my cages, flowering and fruiting all the way. I am especially fond of EGs for their size, a modest 4"er great for sandwich slices. And, it offers just a little tomato tartness in the back of the pallet. I plant mine in succession about 2-3 weeks apart starting in March. Protected from early Spring chills, tomato end blight and ugly horn worms; and fertilized regularly (especially in containers) EGs will reward you with slicing fruit and salsa base right through the Fall. The one drawback to indeterminate vines is the whole debate about what to do with the suckers that sprout out of the leaf bases along the main stem. My experience includes the near fanatical pinching out just as fast as they appear, to ignoring the entire issue and just letting them do their thing. As I have said repeatedly . . . much of the reward in gardening is experimentation. So select an indeterminate that appeals to you and try it both ways !

Planting

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Pick A Sunny Location

Choose a location that gets full sun for **NO LESS THAN 6 HOURS A DAY**. 8-10 is fine. All day is perfect. The sun warms your soil in the spring. And, it is the power source for the photosynthesis taking place in the leaves and the ripening of your much sought after tomatoes.

Good Soil

Healthy tomato plants can have a root system that will develop to more than 5 feet if soil conditions permit. You can encourage root growth by digging down as far as conditions, and your endurance, will permit. On the way down, incorporate as much composted organic materials as you can afford or find. I am a big proponent of Kellogg Patio Plus, and suggest you mix it 50/50 with your native soil. Digging in composted amendments will increase the tilth of your soil, permit better drainage, allow your soil to “breathe” and create a perfect home for your bio village.

Warm The Soil

The only real disadvantage to planting in the early Spring is the cool (even cold) temperature of the soil. Bring the temperature up as much as possible before planting vegetables. Digging in compost and covering the bed with black plastic will attract the sun’s warming rays, build heat in the soil, and conserve as much as possible each day’s added temperature until planting. If you could do this for even a week after tilling the soil, it would greatly advance your tomato crop. This method also has an added benefit. You have already installed a weed barrier and solar collector for your vegetable bed. Slice an X in the plastic, pull the flaps back, plant your seedling, punch a few small hole is the surrounding plastic and *voila* . . . you will be off to the races !

Choose Healthy Plants

When shopping for young tomato plants, select the largest tomato plants you can afford. Avoid tiny six pak seedlings. They won’t have the benefits of a nursery started plant. Instead, take home stout stems, healthy leaves full of rich green color and a well established root system. ***Avoid ANY tomato plants that look yellow, dried out, too spindly, or droopy. Dismiss any whose leaves have spots or blemishes.*** Larger nursery plants mean you can plant earlier with greater maturity and will put you closer to the most rewarding day in your tomato growing season . . . picking your first ripe tomato.



PATIO Plus® is unquestionably my favorite bagged soil amendment for tomatoes; and as a soil for containers.

I grow all my patio plants, including tomatoes, in a bed of 100% PATIO Plus® .

Fertilizing

Like all things that grow . . . tomatoes too need nutrients (food) to reach a fruitful maturity. Tomatoes are peculiar in that they prefer less nitrogen in the beginning of their life and more after they have begun to flower and set fruit. I am guided by this knowledge as I gradually advance my application of various fertilizing products.

Begin With Low Nitrogen

In transplanting a tomato seedling, I plant it deep in a rich loamy soil mix and then give it a drink of **super-THRIVE®**. During the first few weeks, I lightly fertilize every day with a “tea” made from 6 tablespoons of **fish/kelp fertilizer** in 5 gallons of water. This addition of fresh organics to the soil helps to daily increase the microbial activity in the soil without the disturbance of too much nitrogen, (too high a first number) in the formula of a nitrogen based fertilizer.

Transition To Higher Nitrogen

As your plant matures it will have a larger established root system and considerably more vine foliage which will need a on-going fertilizing with a stronger nitrogen fertilizer. At this point the backyard tomato farmer can decide if they wish to pursue applications of more “natural” tomato formulas (lower numbers), or feel satisfied to use more processed fertilizer formulas (with higher numbers). Whichever you choose, be certain to follow the dosage recommendations for tomatoes on the label and **AVOID OVER FERTILIZING** your promising crop of “ *love fruit* ” !

Fertilizers What Does N-P-K Stand For ?

Every fertilizer package will have **three numbers** boldly printed on the label. These numbers represent the percentage, in the package by weight, of the three major nutrients needed for healthy plant development. The higher the number - the greater the amount of that nutrient.

- | | |
|--------------------------------|-------------------------------|
| N = Nitrogen (first #) | For greening, and top growth. |
| P = Phosphorus | For root development. |
| K = Potassium or potash | For overall plant health. |

Tomato TALK



**Kellogg®
Organic Plus®
Fish/Kelp
Fertilizer
5-1-1**



**Kellogg®
Organic
Dry
Granular
4-6-3**

Problems



Verticillium Wilt

Verticillium Wilt is a stubborn soil hosted fungus. Sometimes VW is difficult to distinguish from other leaf maladies on tomatoes. This disease gradually cripples the plant's ability to transport water through the cells of the leaf. This causes the leaves to turn yellow, then brown and dry. Older (bottom) leaves are affected first. The progression of the disease inhibits the plants ability to take in water and nutrients; and reduces the plant's ability to perform photosynthesis.



SOLUTION: There are two ways to help avoid the ravages of Verticillium Wilt. First, because VW is harbored in the soil, avoid planting tomatoes in the same soil or location year after year. Don't plant in the same spot for at least two years. Three if possible. If you are planting in containers, remove the soil and replace with fresh soil every year.

The second and easiest way to head off VW problems is to select tomato varieties that are labeled Verticillium Wilt *resistant*. Some of the more popular varieties include:

Celebrity Hybrid A winner every year. Great flavor, disease resistant and heavy yields.

Best Boy Hybrid Classic tomato in size and shape. Plus, a real pallet pleaser.

Bush Early Girl Hybrid A true bush variety offering extra large tomatoes before the rest.

Early Girl Hybrid (VF) Wilt resistant indeterminate cultivar. Vine produces 4 in. fruit until frost. (This one is The Garden Guy's favorite slicer.)



Problems

Blossom End Rot

It won't take a microscope to find this microscopic fruit wrecker. When it does develop, you will be able to easily identify a brownish black spot of decay working its way out from the bottom of the fruit where the pollinated blossom had been. This condition usually occurs at fruit set through ripening. If it happens early, pick and discard damaged fruit. If it develops on a ripe fruit, the majority of the tomato may still be eatable. These are prime candidates for the salsa mixer.



SOLUTION: Actually prevention is the best remedy for Blossom End Rot. Calcium deficiency is often blamed for this condition. This can be caused by using too much high-nitrogen fertilizer early in the development of the tomato plant. Or, it can be induced by the ups and downs of infrequent or inadequate watering. The Garden Guy has had little to no difficulties with Blossom End Rot through the years. This is likely due to the early use of *fish fertilizer* (an extremely low dose nitrogen source) in the daily watering of tomatoes in Skip's Tomato Machine. Secondly, each half barrel gets one 5 gal. bucket of fertilized water every day. Fish fertilizer is used to help the highly organic soil in the half barrel to begin and maintain its microbial "web of life" so vital to a healthy and productive tomato plants.



Then, when the tomato plants are large enough to "set fruit" The Garden Guy switches to the higher nitrogen fertilizer formulas necessary to keep up with the higher nitrogen demands of the mature and still growing tomato plant.



If you have been plagued by this scourge in the past, you will likely face it again. Regular applications of a *end rot deterrent* (mixed as directed) to the foliage and fruit should help to prevent or correct this condition.



Problems

Blossom Drop

Another malady suffered by tomato vines is the premature dropping of their yellow flower blossoms. The result of course is no opportunity for the fallen blossom to be pollinated and develop a young tomato at its base. Blossom Drop can be caused by several factors including: temps too high or low, lack of pollination, too much or little nitrogen, extremes in humidity, lack of water, insect damage, diseases, and/or too heavy a fruit set. All of these can cause stress in the plant which causes it to unexpectedly shed its blossoms.



SOLUTION: Doing what you can to avoid unnecessary stress in your tomato plants is the first order of business. This can be accomplished by selecting varieties known to thrive in the average spring, summer, and fall temperatures in your region. Water adequately and regularly. Avoid over or under fertilizing. And, keep your ripe fruit picked.

All these factors can cause stress which in turn can cause blossoms to fall off. Anything that keeps a plant, especially a plant with so much to accomplish, from developing a ripe fruit full of seeds should be planned for and avoided.



Remember, without pollinated blossoms . . . there can NEVER, and I do mean never, be any juicy ripe tomatoes !



Problems

The best way to avoid disappointments in your Tomato Patch is to anticipate problems - and be prepared to fend them off, or avoid them altogether. Listed in this module are several of the most common problems and their advised solutions. Some problems, which can be avoided in cultivation, are addressed in other Garden Guy Quick Guides.

Tomato Hornworm

OMG! If you are not vigilante, you can lose your entire tomato crop - literally overnight- to this giant pest. The Tomato Hornworm is the larva (caterpillar) born from the eggs of a huge, unwanted visitor, the Hornworm Moth.

SOLUTION: In late May, begin to carefully examine your vines EVERY DAY, as early in the day as possible. When you find these big bad boys (some nearly as big as a your middle finger) they will be immediately adjacent to leaves they have just finished stripping. And I mean stripped ! These big buggers leave only the naked stem on your prized tomato plant. Prevention starts with keeping an eye out for the pupae egg case of the critters when you prepare your soil in the late fall or early winter. It is a hard, brownish spindle shaped case about 2.5 inches long. Destroy those you find !

Early in the Spring purchase a bottle of **BT (bacillus thuringienis)** concentrate. BT is a living organism you will mix and spray over your entire tomato vine. When the worm eats the treated leaf, the BT gets in their gut and kills the worm. You will find dead worms shriveled up right on the vine. As with all controls, be careful to wear gloves, long sleeves and DO NOT breath in the spray.

Remember too, BT is a living organism. So store it, with the top on tight, on the door of your refrigerator. This way, your little army of worm fighters will remain suspended until you need to whip up a new batch of spray to ward off the next caterpillar invasion anywhere in your yard or garden.



Hornworm Moth and chrysalis case.



BT is the natural way to easily-control leaf chewing caterpillars.

BT DOES NOT KILL BEES

and other important

pollinators, or earthworms.

The usual washing of picked

tomatoes makes this a

safe and natural defence.





Skip's Tips

Buy/Plant Large Tomato Plants

Unless you're on a real tight budget - by large starter tomato plants in gallon or 5 in. pots - especially if you are late getting started this year. Larger plants give you a head start on realizing ripe fruit with more foliage and developed roots. Plus, you have more to bury deep with the larger plant.

Maximize Your Soil's Potential

Soil is one of the three vital components (sunshine and water, the others) that you can influence the most. Even the driest, hardest, most desolate soil can be amended to rival any of the fabled growing soils of the world. If you are planting in the ground amend the soil at least 50/50. 50% native soil mixed with 50% soil amendment. If you are planting in containers, ignore poor native soils and use only 100% of some quality bagged soil. The Garden Guy chooses Kellogg's Patio Plus for both of these soil situations.

Plant Deep

Note those little white hairs on the stem of your tomato plant. Each of those "hairs" has the potential of becoming a root if they are under the soil at planting. Pinch off (with your fingernails) all the leaves - except the top two - at the stem. Set the root ball at a level that will leave just the stem end with the two leaf sets protruding out of the soil used to fill in the planting hole.

Water Carefully and Consistently

Except for those regions where Summer rains are frequent, tomato plants benefit most from a watering plan that takes into consideration drainage capabilities, frequency and amounts of water used to irrigate plants. In rain country all you can do is allow for maximum drainage. In dryer regions watering too little and not often enough will have the obvious results. But, even in these regions too much water, too often coupled with poor drainage can invite a host of plant abnormalities and diseases. Finally avoid overhead watering. If you must, use a sprinkler that rises only a few inches up the plant stem. Like all the plants in your yard and garden you want the foliage to go in the evening and nighttime hours. . . **DRY !**

Have A Fertilizer Plan

Remembering that the application of nitrogen is a balancing act, it is wise not to fertilize willy nilly. The garden guy starts off with daily doses of negligible nitrogen "tea" until fruit set and then starts a once a month regimen of high nitrogen time release granular fertilizer every month until production ends.

Continued

Skip's Tips Continued



Stake or Cage Your Plants

Tomato plants are healthier if they are NOT sprawling on the ground. Tomato plants held upright off the ground are less likely to succumb to diseases and fungus because they are permitted to stay dry. I am a big fan of wire cages like those used in the Tomato Machine. They are inexpensive, last a long time, and contain especially productive vines. Caution: vines fully laden with fruit all the way to the top of the cage can be toppled by the rouge summer windstorm. If you can anticipate such a blow, stake your cages down tight with tent stakes and cord.

Know How You Will Handle "Suckers"

As pointed out in these pages, there are two definite schools of thought on how to handle the question of - Suckers, Pluck 'em, or Leave 'em ? Even after all these years, The Garden Guy is undecided. Remember, a good gardener is always willing to take a chance. Designate at least two tomato plants of the same variety. Label one "Suckers" and leave the suckers on the stem. On the other remove the suckers as advised in this module . . . and see what happens !

Consider The Benefits Of Compost Side Dressings

If you enjoy the availability of well rotted compost, and/or materials likely to compost well, consider side dressing each tomato plant with with an area of compost. The area can be 2-4 feet in diameter and up to 3 in. thick. Side dressings perform three functions very well. First, they supply a steady supply of slow released nitrogen throughout the growing season when added to on a regular basis. Second, this "ring" of compost creates an excellent weed barrier. And, finally, this mulch helps to conserve moisture in hotter climates or planting areas.



Skip Batchelder



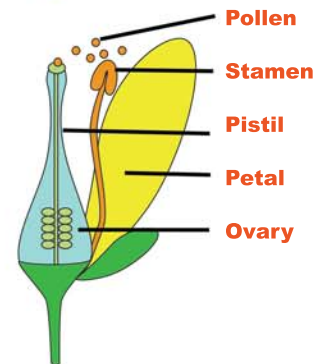
Pollinating

Tomato TALK



Appreciating The Need For Pollination

If your plants get past blossom drop, their blossoms **MUST** be pollinated to produce fruit. That means something (usually an insect) has to carry the pollen from one flower part to the other before a fruit can be set in the blossom. If you are denied the benefit of flying insects that could be attracted to your garden you can 1) plant fragrant flowers close by to attract bees and other flying insects to your plants; or 2) take the time to delicately pollinate (pollen from the anther (male) to the pistil (female) with a small artist's paint brush. I'll admit it is pains taking, but it could mean the difference between just healthy vines and tomato laden vines.



Nature's Little Helpers

In a healthy vegetable garden, there can be dozens of insect types that have the potential of moving pollen from one flower to another, on your tomatoes or other vegetables that must have pollination to set fruit. Generations of gardeners have looked to and counted on honeybees, wild and domestic, to be their go-to pollinators. Unfortunately, for reasons that are still being debated, both populations of honey bees have declined dramatically in the new Century. All of us, every garden caretaker, must restrain from "nuking" our yards and gardens. Pesticides, should be an absolute last resort in defeating the "bad bugs" that invade our gardens. Pesticides hurt or kill the much needed honey bee, hover fly and other insect pollinators that work alongside us in our gardens and home orchards.



Photo
Warren Photographic UK

Join The Shakers ?

There is a growing group of backyard tomato growers who embrace the really hands-on technique for manually pollinating their vines. They are called "Shakers". This technique encourages the gardener to grasp each vine at its base and give it a shake or two. Nothing strong enough to damage the vine or dislocate blossoms or newly set fruit. Just gentle enough to dislodge a few ripe pollen grains in the hope that they will settle on the pistil of an obliging flower. The Garden Guy has always found a way to encourage natural pollinators (adjacent flower plantings) if you are desperate for any form of pollination . . . might consider joining the Shakers on a day that is . . . **WARM, CALM and DRY !**





Skip's "Tomato Machine"

My "Tomato Machine" has become quite the Buzz among the many followers who have been inspired by my Tomato TALK Quick Guide . It has been the "perfect solution" for many who have finally decided to enter, or reenter, the popular hobby of growing tomatoes in their vegetable gardens, or wherever there is enough sun.

How do you enjoy juicy, ripe tomatoes in areas plagued with poor soil, or whose yard does not have room for a conventional garden patch ? The answer might be . . .

"Skip's Tomato Machine"



The Tomato Machine is a sturdy combination of common off-the-shelf products:

Half Oak Barrel
Sheet of Remesh Wire
Three Concrete Blocks

that when combined offer gardeners an enormously efficient container in which they can successfully grow an abundance of the tomatoes of their choice, or other vegetables . . . in a nearly *perfect organic environment*.

To achieve this, just fill with three bags of **Kellogg's Patio Plus®** for a soil depth that will support two mature tomato plants. To get a jump on the growing season the tower is wrapped in a 2.0 mil **Clear Plastic Drop Cloth** to create an early season hot house environment. To ensure exceptionally healthy and productive plants, 1 gal. starter tomato plants are "**deep planted**"

Skip's “ Tomato Machine ”

. . . continued.

Tomato TALK



This section of Tomato Talk is offered as instruction for those who have taken home the components for their Tomato Machine; and encouragement for those still contemplating the application of this Eco-Smart planting solution.

1. Put the barrel up on the three blocks - - in FULL SUN.
2. Fill the barrel with three bags of Kellogg Patio Plus®.
3. For the Bonnie® Husky Red Cherries, remove the plastic band and gently peel away all (or at least the top 1/3) of the peat pot.

Note: I don't like to bury the the peat pot as it comes from the store. The rim sticks up out of the soil and wicks the moisture away from the tender new roots.



4. Unlike other Tomatoes such as Early Girl, I don't plant Huskies “ deep”.
5. Mix 1 cap full of the superTHRIVE® in 2 gallons of room temperature water and slowly drench each of the two plants you are planting.
6. Once planted, place the wire cage into the barrel and press down until tight.
6. Wrap the entire cage with the plastic film. I use wooden clothes pins for attaching.

Note: *Be sure to leave the top open and uncovered (see photo) because on warm days it will get HOT inside and the extra heat has to be able to escape.*

You can remove the entire plastic sheet when the daily air temperature reaches 80° on a regular basis. Keep the plastic handy in case the weather pattern cools. Then put it back on until you again experience 80° days.

Skip's "Tomato Machine"

. . . continued.

Tomato
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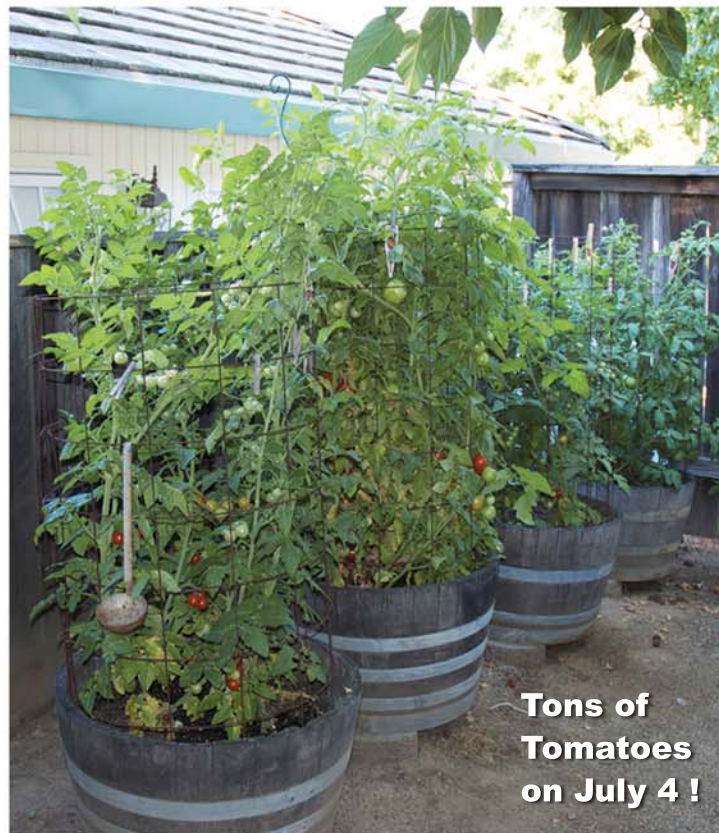


After the first week, you should give your Tomato Machine its first feeding of light nitrogen. Dilute 1/4 cup of the Kellogg Fish/Kelp Fertilizer in a five gallon bucket and slowly pour it into the barrel. What we are doing here is bringing to life the great ingredients of the Patio Plus® soil and slowly awakening the microbial "village" that is going to make sweet little gases for the tomatoes to dine on for the next couple of weeks.

As soon as your plants have set fruit, start a once a month feeding with *Kellogg Organic Plus Tomato Fertilizer*. A big handful, (about 1/2 cup) per plant each month through the growing / fruiting season - all the way to the end of your harvest, late next fall.

Finally, NEVER let your Tomato Machines DRY OUT ! Water every day. By the time the plants are approaching the upper ribs of the wire tower you should be watering at least 3-5 gallons of water per day, per barrel. When the water begins to run out of the bottom of the barrel, you are DONE for the day. This indicator of complete watering is yet another benefit offered only by container gardening.

Following these instructions, and given proper care and attention, you should enjoy results something like this.



**Tons of
Tomatoes
on July 4 !**



Wishing You Every Success

I hope you have found this
Quick Guide - Tomato Talk
valuable and inspiring.

Gardening is just one of the interests enjoyed by my league of faithful followers who have shared many of my experiences through one of my personally authored publications:

- WEBSITE skipsoutdoorliving.com
- BLOG skipsoutdoorliving.com/blog
- RESOURCES skipsoutdoorliving.com/resources
- CONTACT skip@skipsoutdoorliving.com



Better Outdoor Living With Every Visit

is divided into these main areas of interest

**Yard and Garden
Outdoor Cooking
Patio Living**



Skip Batchelder

