

TOMATO CULTURE

By David Greenberg

Tomatoes are a favourite summertime treat in the home garden and a top-selling, high-profit crop on the farm. I've picked up a number of tricks over the past fifteen years of market gardening.

Variety selection

Variety selection is an important first step. A lot of people have discovered the wonderful diversity of tastes, textures and looks heirloom tomatoes offer. It seems that every year more people are growing them in home gardens and looking for them at farmers' markets and in CSA boxes. As lovely as the heirlooms are, there are some compelling reasons to consider going with hybrids.

In growing seasons with a lot of cold wet weather, I have found that heirlooms tend to succumb to disease pressure while the hybrids survive. In fact, even in good years, the modern hybrids I grow almost always outyield the heirlooms. Last summer, the difference was striking even though growing conditions had been excellent. Walking down a row of cherry tomatoes in late summer, the hybrids were easy to pick out because they were still growing vigorously, mostly untouched by the powdery mildew that had crippled the heirlooms weeks before.

Because of this, I plant mostly hybrid tomatoes in my market garden. In addition to the problem with diseases, two of the heirloom's positive qualities for the home gardener work against me as a market gardener. Their very thin skins and silken soft flesh makes heirlooms more difficult to handle, even on my very small commercial scale.

I farm in Centre Burlington, Hants County, Nova Scotia, near the Bay of Fundy (Zone 6b with an average frost-free growing period from June 1 to October 15).

Over the years, I have grown tomatoes for farmers' markets, a small CSA, health food stores and small wholesale accounts. Now, our crop is mostly for U-pick sales during our open farm day program. The 2011 planting will fill most of our small hoophouse and a 40 ft. x 100 ft. outdoor planting.

—David Greenberg



With lots of room, adequate fertility and light, you will have robust seedlings come time to plant outside.

There are exceptions. Green Zebra is a lovely open-pollinated heirloom variety that has been a dependable producer of abundant, easy to handle crops for me over the years.

When it comes to the hybrids, there seems to be two broad classes. The first category are the large, mostly beefsteak varieties that are to blame for the commonly held idea that hybrids don't taste good. My guess is that these varieties were bred with an overemphasis on shipping quality and yield, leaving taste behind.

On the other hand, there are quite a few lovely smaller-fruited hybrids that combine great disease resistance, yield and taste. For example, Juliet is a small (1½ to 2 oz.) plum tomato borne on prolific clusters. The taste is meaty and rich. The skins are not particularly thick but they resist cracking. In addition, Juliet is the most disease-resistant tomato I've found.

Another truly wonderful hybrid is the Sungold cherry tomato. Many people think that Sungolds are the best tasting tomato there is. I think Sungolds are



David starts tomatoes in an undivided seedling flat by sowing seeds very thickly and covering the seeds with perlite or vermiculite.

the best tasting vegetable! They also yield well and are fairly disease resistant. Their only fault is that, like so many cherry tomatoes, they are very prone to cracking, especially when there has been a lot of rain. For this reason, I grow some in a hoophouse so I can control how much water they get.

Juliet and Sungold are both in the 'tasty tidbit' category. If you are looking to grow tomatoes that will fill big boxes for sales by the pound, or can be used for sauce or slices on hamburgers, you need a bigger, heavier, main crop variety. The plum/saladette types and the smaller round varieties are where I look for good taste combined with substance.

For many years, my favourite main crop tomato was Early Cascade. I could overlook its thick skin and tendency to have green or orange shoulders because of its enormous yield, great taste and disease resistance. When Cascade disappeared from the seed catalogues a few years ago, I started trying various new tomatoes to re-

place it. So far, I have liked most of the replacements well enough but continue to search for a reliable new favourite.

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Starting seedlings

Having chosen suitable varieties, the next step is growing the seedlings. Germination is best in warm soil, at least 75°F (24°C). To keep the soil that warm, I use electric heating coils in a specially built seed starting bench in a greenhouse. On a home-scale, I have had good luck placing the newly planted tomatoes on top of a propane water heater or near a wood stove. Small heating mats are also available from seed catalogues. They are a worthwhile investment

if you are planning serious home seedling production.

I start tomatoes in an undivided seedling flat by sowing seeds very thickly in a ¼-inch deep furrow. I prefer to cover the seeds with perlite or vermiculite, rather than soil or peat moss, because these are so light and fluffy and can provide a deeper covering. The thicker covering will ensure a more conform level of moisture which is critical for germinating seeds.

When using more dense materials (e.g. soil) to cover seeds, a most annoying thing can happen. They absorb enough moisture to germinate, send their roots into the potting medium, and then sprout. But if the covering material has dried out too much, the outer husk of the seed will be too dry and hard to let the embryonic leaves break free. I have lost a considerable number of seedlings to this problem.

Growing conditions

Once the seedlings have their first true leaves, it's time to transplant them into individual pots, an open seedling flat or soil blocks. Whatever system you use, the important thing is to give them lots of room and adequate fertility and light so you have a robust seedling come planting day. If I'm planning to grow the seedlings for more than six weeks, I transplant them into a large (at least 6-inch) container or, even better, a 4-inch soil block.

Providing air movement in the greenhouse or on your windowsill will make for much sturdier plants. The air movement makes the plants stronger. Even in a greenhouse with the doors open most of the day, I found a huge differ-

work but never produces the earliest or highest quality crop. Most years I plant a row or two of unsupported tomatoes for selling by the box to the home-canning crowd. Even at a low price and with a moderate yield, the crop pays.

Trellising tomatoes by winding them around a string and pruning to one main stem is the standard technique for greenhouse production. This makes sense since it is the highest yielding system and promotes the best air circulation, which in turn protects against disease. When using valuable greenhouse space, the extra labour involved is well worth it.

The most common mistake is to start seedlings too early.

I have used the same technique when growing in the field by building a strong trellis with heavy wooden posts and wire. This has been the most productive system but also, by far, the most labour-intensive. There is an easier way to trellis tomatoes. It's called the Florida Weave. In this system, wooden stakes are driven into the ground about every three feet, leaving two plants between each stake. String is wrapped in a figure eight pattern around the stakes, "weaving" the tomato plants onto the stakes. Many websites describe the process in detail (e.g. www.foogod.com/~torquill/barefoot/weave.html).

The basket weave routine is much faster than pruning and tying. I have never tried using the Florida Weave because of the disease pressure tomatoes have to overcome in this cool, wet climate. My concern has been that the dense, unpruned foliage will prevent proper air circulation, leading to blight and powdery mildew infection. I plan to do a side-by-side trial with string trellis and Florida Weave crops to see if the savings in labour is worth the increased disease pressure. If the results are interesting, I'll report back.

David Greenberg is an organic market gardener farming in Centre Burlington, Nova Scotia, near the Bay of Fundy.

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