

## Tomatoes 'R' Us

### Topic: Pest Control in Vegetables

#### Garden History

Our property was purchased for the potential of growing vegetables and edibles. Originally, we started out with two raised beds that allowed us to create a small edible garden. We broke down one raised bed to make room for a greenhouse. The remainder of the property was not suitable for growing. It took some hard labor. We amended the soil in the garden beds with coffee grounds, manure, and compost. Over 7 years and with two Master Gardeners living in the home, we rototilled, amended the native soil, and moved a chain link fence to increase the size of the gardens. Our vision has created an expanded, productive, and beautiful 1,000 square foot, in-ground vegetable garden, covered with 40% shade cloth and in-ground irrigation. Additionally, the remodeled greenhouse will have an elevated raised bed with potatoes growing in it.

Because of our love of tomatoes and Italian food, we have experimented with different varieties of tomatoes that can thrive in our climate. We have developed a relationship with an out-of-state college professor who provides us with one-of-a-kind seeds in exchange for crop growing information. We have grown "Garden Gem" (similar to a Roma) and a Garden Treasure (oversize tomato) with great success. We are meticulous in journaling all crop details. Depending on successful seed germination, we are able to share and donate our tomato plants. We have donated to our Master Gardener's Demonstration Garden and to "Flowers and Bullets Midtown Farm."

#### Garden Basics

**Irrigation:** Originally, we used soaker hoses for irrigating the garden. As the garden expanded, this method was not effective. In 2019, we hired a professional to install our irrigation and assist with crop sequencing. Having control of the irrigation via iPhone is a major plus to the system.

**Fertilizer:** We perform a nitrogen, phosphorous and potassium (NPK) soil test before planting. This year we added phosphorus which encourages flowering on the tomato plants. This worked great as it added more flowers and less foliage. Bi-weekly we fertilize a concentrated liquid 2-2-2 organic fertilizer on each individual plant. Bone and blood meals are utilized twice a year at the base of the plants. This year we hired a company to spray worm castings tea all over the garden.

**Pest Control:** The organic pest control method I use: 1) spray with water, 2) spray with dawn and water, 3) neem oil for most all pests, and 4) *Bacillus thuringiensis kurstaki* (Btk) for caterpillars. Ants have been a problem this year, so we are using diatomaceous earth. Every year we apply beneficial nematodes to the entire garden. It helps with fungus gnats, grubs, and cutworms; we've had them all.

#### Garden Philosophy

TOMATOES! I wanted to grow a big tomato with a big flavor (like I had growing up in Pennsylvania). I chose varieties that can thrive in this climate (e.g. Punta Banda, Bloody Butcher, and Yellow Pear). We've learned that the small cherry-type tomatoes grow better in the desert. With respect to the hot summers and cool winters, we learned very quickly to grow only the vegetables we like to eat. The 'winter garden' is planted in September/October with lettuce, spinach, broccoli, cabbage, cauliflower, cucumber and herbs. In the greenhouse, tomato seeds are started in December, using tray heating pads and grow lights, along with a large garden space heater when the temps go below 55 degrees. The tomato plants go into the ground mid-March and soil preparation is worm castings, bone meal, and sometimes Epsom salts in each hole. Garlic is planted in October and Onions are planted in December. By May we are harvesting garlic, onions and tomatoes.