

Proper Nutrition For Prolific Tomato Plants

Every tomato grower has a "secret recipe" for tomato growing success. An integral part of high tomato yield is proper plant nutrition. Plants need food, too! Giving a plant the right food at the right time will not only increase fruit yield, it will also help prevent damage from diseases and pests.

Plant Nutrients

Plants do not eat hamburgers and French fries, but they do still need "nutrients." Nitrogen, Phosphorus and Potassium are the three nutrients most commonly fed to plants. Most fertilizers are a combination of the three. When reading a fertilizer package, a three number series such as 3-0-3, or 15-10-5, presents the ratio of all three nutrients in the fertilizer. Other nutrients and minerals, in smaller amounts, help tomato plants grow robustly and healthily. Plants get nutrients from the soil in which they are planted, so soil preparation is integral to providing plant nutrients in proper amounts.

To determine which nutrients your garden soil needs to promote healthy plant growth, prepare a soil sample and send it to your local cooperative extension office for analysis. The soil sample will allow you to properly prepare the garden soil and add just enough of each lacking nutrient to grow healthy plants. Another important test is the soil pH. Soil pH affects the way plants are able to take in nutrients. If your soil is too high or too low, you will want to amend the pH by adding mulch (to increase acidity) or lime (to increase alkalinity.)

When to Add Nutrients

Tomato plants need nutrients at differing amounts at various stages of growth. After receiving soil test results and before planting tomatoes, work a general fertilizer into the soil. Ratios of 5-10-10 or 8-16-16 are good to start. The soil test results will tell you if you are seriously lacking one nutrient or another.

Once the plant begins growing, different ratios of nutrients promote best growth. Once the plant starts flowering, it needs a higher ratio of potassium.

Soil Composition for Plant Nutrition

Adding fertilizer is only one step to providing plants with proper nutrients and increasing crop yield. Soil composition and structure directly affects tomato plant health. Tomato plants thrive by growing roots deep into the soil. Hard clay soils must be broken and amended with compost to promote healthy root growth. Overly sandy soils need addition of organic matter in order to hold water and nutrients.

Compost for High Fruit Yield

Organic matter is an essential component of soil. Adding proper organic matter will greatly improve soil health, while adding improper organic matter is detrimental to soil. Organic matter can be added by top dressing or double digging. Top dressing with organic works exactly as it sounds-you add organic matter to the top of the soil, almost like a mulch. Double-digging requires digging and removing soil, mixing the organic matter into the soil, and replacing the newly combined soil.

Great organic matters are already composted, or broken down. As wood chips, leaves and other compost breaks down, it uses nitrogen. It is important to add composted organic matter rather than fresh, as fresh matter will remove essential nutrients from the soil. If fresh organic matter is all that is available, be sure to add nitrogen along with the organic matter.

Soil composition is one key to tomato growing success. Structure, pH, and nutrient availability all contribute to plant health. For more detailed information on soil health and how to manage nutrition (including diagnosing nutrient deficiencies), consult a comprehensive tomato growing reference such as How to Grow Tasty Juicy Tomatoes.

About the Author

Annette Welsford is author and publisher of "How to Grow Juicy, Tasty Tomatoes." Visit her website <http://www.bestjuicytomatoes.com> for more information about how to grow the most robust, prolific tomato plants ever!

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