

# Soil Nutrient Analysis Laboratory

Soil Nutrient Analysis Laboratory; 6 Sherman Place, Unit 5102, Storrs, CT 06269-5102 • Phone: 860-486-4274  
Fax: 860-486-4562 Location: Union Cottage, Depot Campus, Mansfield

## SUGGESTED FERTILIZER PRACTICES FOR BLUEBERRIES

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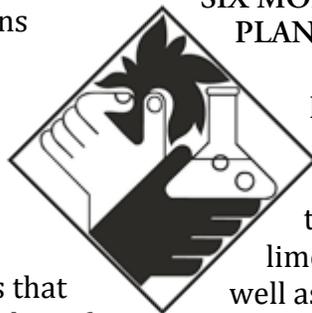
Blueberries are popular in home gardens because of their flavorful fruit and manageable size. For best results, plant blueberries in an acidic (pH 4.5 to 5.4), well drained, sandy loam fortified with organic matter.

Blueberry plants have fine, fibrous roots that are primarily found in the top 8 to 12 inches of soil.

These fibrous roots lack root hairs present on most other plant species and because of this, blueberry plants have a limited ability to absorb nutrients and water. This situation is alleviated somewhat by a special fungal organism present in the soil called mycorrhizae. A particular mycorrhizal fungus lives both in and on blueberry plant roots, and aids in the uptake of nutrients and water. Clear cultivation and prolonged use of synthetic fertilizer will reduce mycorrhizal numbers.

The fibrous roots of blueberries also have much difficulty penetrating compacted soils, so loosen soils and add organic matter before planting. The ideal organic matter content for growing blueberries is between 4 and 7%. Avoid sites that are subjected to extreme wet or dry conditions.

Organic mulches are suggested to retain moisture, moderate soil temperatures and retard weeds.



### SIX MONTHS TO ONE YEAR BEFORE PLANTING

If soil pH is not in the range necessary for blueberries, add limestone or sulfur\* at the rate recommended on the soil test report. Use dolomitic limestone that contains magnesium as well as calcium if it is necessary to raise the soil pH.

If the soil test results for magnesium are in the below optimum category but limestone is not recommended, apply 10 ounces of Epsom salts per 100 square feet.

If the soil test results for phosphorus are in the below optimum category, apply superphosphate (0-20-0) at a rate of 1 1/4 lbs. (2 1/2 cups), triple superphosphate (0-46-0) at a rate of 1/2 lbs. (1 cup), or bonemeal (1-11-0) at a rate of 2 lbs. (6 cups) per 100 square feet. If soil test results for potassium are below optimum, add potassium sulfate (0-0-43) at a rate of 3/4 lbs. (1 1/2 cups) or greensand (0-0-7) at a rate of 10 lbs. (14 cups) per 100 square feet. Incorporate all necessary amendments to a depth of 6 to 8 inches. Retest soil before planting.

### CHANGING THE pH IN ESTABLISHED PLANTINGS

Mixing amendments such as ground limestone or sulfur\* into



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the soil of an established blueberry planting is difficult because of the shallow, dense root system. Surface application is suggested with increments of 1/2 lb. (1 cup) sulfur or 5 lbs. (7 cups) of ground limestone per 100 square feet applied in the spring and again in the fall until the full recommended amount is added to the soil. Recheck the pH one-year after the last sulfur or limestone addition.

## FERTILIZERS

Fertilizers that supply nitrogen in the ammonium form are preferred over those supplying nitrogen as nitrate because blueberries are sensitive to nitrate and injury may occur. Use a 7-7-7 fertilizer or one of similar grade made for acid-loving plants.

**Year of planting:** Three to 4 weeks after planting, apply 1 ounce (1/8 cup) of a 7-7-7 or other similar grade acidifying fertilizer per plant. Spread the fertilizer evenly over the ground in a 15 to 18 inch circle around the plant. Blueberries are easily injured by excess fertilizer or concentrated placement. Lightly scratch in and water. Repeat at the same rate in 4 to 6 weeks.

**Second year:** Apply, per plant, 2 ounces (1/4 cup)

of a 7-7-7 or other similar grade acidifying fertilizer in April and again about 4 to 6 weeks later. Lightly scratch in and water.

**Third year and older:** Fertilize in spring shortly after buds break. Each year increase the amount of fertilizer by 2 ounces to a maximum of 12 ounces per plant for blueberry bushes that have been in place 6 years or more. If growth seems excessive, reduce the rate of fertilization by 1/3 to 1/2. As the diameter of the blueberry bush increases in size, so increase the area of ground around the plant to be fertilized.

\*Aluminum sulfate can also be used to acidify the soil. To make the same pH change as with sulfur, multiply the recommended rate for sulfur by 6. However, because aluminum sulfate is a soluble salt, it can burn roots. For this reason, sulfur is preferred on planted ground. If aluminum sulfate is used on planted ground, it should be applied in 4 to 5 equal portions at 3 to 4 week intervals, each application followed by irrigation.

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