

Soil Nutrient Analysis Laboratory



Soil Nutrient Analysis Laboratory; 6 Sherman Place, Unit 5102, Storrs, CT 06269-5102

Phone: 860-486-4274 • www.soiltest.uconn.edu • Location: Union Cottage, Depot Campus, Mansfield

Suggested Fertilizer Practices For Blueberries

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

Have a soil test done. 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 sq. ft.

If the soil test results for phosphorus are in the **below optimum**, apply triple superphosphate (046-0) at a rate of ½ lbs. (1 cup), or bonemeal (1-11-0) at a rate of 2 lbs. (6 cups) per 100 sq. ft.



If soil test results for potassium are **below optimum**, add potassium sulfate (0-0-50) at a rate of ¾ lbs. (1 ½ cups) or sul-po-mag (0-0-22) at a rate of 1.5 lbs. (2 cups) per 100 sq. ft.

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 the soil of an established blueberry planting is difficult because of the shallow, dense root system. Surface application is suggested with increments of ½ lb. (1 cup) sulfur or 5 lbs. (7 cups) of ground limestone per 100 sq. ft. 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 or 4-3-4 fertilizer or one of similar grade made for acid-loving plants. Without a soil test:

Year of planting: Three to 4 weeks after planting, apply 1 ounce (⅓ cup) of a 7-7-7 or 2 oz (¼ cup) 4-3-3 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 (½ cup) of a 7-7-7 or 4 oz (½ cup) 6-4-4 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 or 4 oz, respectively, to a maximum of 12 or 24 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, be sure to increase the area of ground around the plant to which fertilizer is applied.

*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.

Note:

10 lbs. of 10-10-10 will supply plants with 1 lb. of Nitrogen (N), 1 lb. of Phosphate (P₂O₅) and 1 lb. of Potash (K₂O) per 1000 sq. ft. (Phosphate is a form of phosphorus; Potash is a form of potassium)

10 lbs. of 5-10-10 will supply plants with 1/2 lb. of Nitrogen (N), 1 lb. of Phosphate (P₂O₅) and 1 lb. of Potash (K₂O) per 1000 sq. ft.

By D. Pettinelli, 2001, Revised 2015
UConn Soil Nutrient Analysis Lab

10 lbs. of 5-10-5 will supply plants with 1/2 lb. of Nitrogen (N), 1 lb. of Phosphate (P₂O₅) and 1/2 lb. of Potash (K₂O) per 1000 sq. ft.

To Supply Nutrients Using Natural/Organic Sources Use The Following Equivalents:

1 lb. of Nitrogen can be supplied by 8.3 lbs of bloodmeal (12-0-0) or 11 lbs. of corn gluten (9-0-0).

1 lb. of Phosphate can be supplied by 6.75 lbs. of bonemeal (3-15-0) or 33.5 lbs. of rock phosphate (0-3-0)

1 lb. of Potash can be supplied by 25 lbs of kelp meal (1-0-4) or 4.5 lbs. of sul-po-mag (0-0-22)* or 2 lbs. of potassium sulfate (0-0-50)* **

Keep in mind that the NPK analysis of natural organic products may vary by producer and adjust your application rates accordingly.

*Note: May need to be special or mail ordered.

**Note: Not all sources are certified for organic production.



PLANT SCIENCE AND LANDSCAPE
ARCHITECTURE

www.soiltest.uconn.edu

Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Gregory J. Weidemann, Cooperative Extension System, University of Connecticut, Storrs. The Connecticut Cooperative Extension System is an equal opportunity employer and program provider. To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, Stop Code 9410, 1400 Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964