
 Blueberries

Management Highlights

- Target pH: 5.2
- If soil pH is 5.5 or greater, consider another site or apply 1/3 cup elemental S and a ¼ teaspoon per planting hole 3-6 month prior to planting to lower soil pH.
- Split N applications to improve N-use efficiency by the plant.

Introduction

Blueberries are acid-loving shrubs which require a lower soil pH (desired pH range = 4.5 -5.4) than do most other plants for optimum plant growth. At higher soil pH's, plants may exhibit reduced growth or fruit production or symptoms of iron deficiency such as light colored leaves. Maintaining an appropriate soil pH should minimize the occurrence of these conditions. Mulching the plants with acidic materials such as pine needles, incorporation of peat moss in the soil around the plant, and/or the use of fertilizers specifically formulated for acid-loving plants will help to achieve this goal.

Soil pH, Soil Acidification and Liming

Blueberries are acid-loving plants. The target pH for blueberries on most Delaware soils is 5.2. If soil pH is 5.5 or higher, consider another site or acidify the soil using elemental sulfur. Recommendations for acidifying soil based on current and target pH are given in *Soil Acidification -- Chapter 3, Section 4.4.5*. When soil acidification is required due to high soil pH, apply ¼ teaspoon chelated iron to the planting hole to prevent iron deficiency in the plant

If soil pH is less than 4.5, liming is recommended. The lime recommendation for a specific field is calculated from the soil pH and buffer pH measurements using the steps outlined in *Calculating the Lime Requirement -- Chapter 3, Section 3.4*. Avoid overliming in order to prevent deficiency of micronutrients such as iron.

In most cases, the lime requirement can be met by either calcitic or dolomitic limestone.

Dolomitic limestone is recommended if:

- soil test Mg is less than 50 FIVs, or
- soil test Mg is between 50 and 100 FIVs *and less than soil test Ca*.

Calcitic limestone is recommended if:

- soil test Mg is greater than 100 FIVs, or
- soil test Mg is between 50 and 100 FIVs *and greater than soil test Ca*.

Nutrient Recommendations

Recommendations for nitrogen (N) rate, application method and application timing for blueberries are dependent upon the establishment and size of the plant. *Newly planted blueberries and plants less than 4 feet high* should be fertilized individually in three applications – one each in March, May and June. When either soil test phosphorus or potassium is *Optimum or lower (less than 101 FIVs)*, apply 1-2 oz of a complete fertilizer such as 10-10-10 or 12-4-8 per application to supply needed N as well as P and K. When both soil test P and K are *101 FIVs or higher*, apply 1 oz. of ammonium sulfate (21-0-0) per plant per application. Fertilizer should spread over an area 18 inches in diameter. At least 4 inches of water as rainfall or irrigation should be received between applications.

Blueberry bushes 4 feet high or taller can either be fertilized as individual plants or on an area basis. Plants should receive 0.8 oz N/plant or $\frac{3}{4}$ lb N/1000 square feet in the early spring just before buds begin to swell and again after harvest. This rate is the equivalent of 4 oz per plant or 3½ lbs/1000 square feet of ammonium sulfate (analysis 21-0-0 -- *recommended when soil test P and soil test K are both 101 FIVs or higher*) or 6 oz per plant or 5½ lbs/1000 square feet of 12-4-8 (*recommended when either soil test P or soil test K is 100 FIVs or less*). The selection of N source depends on the need for P and K as indicated by the soil test. Nitrate sources of N such as calcium nitrate and ammonium nitrate should *not* be used on blueberries.

Other Nutrients

No other nutrients are known to be limiting to blueberries in Delaware.

Additional Information

See Soil Test Notes 1 and 12 (Appendix APP-7) for additional information concerning nutrient management of blueberries.