



## BLUEBERRIES FOR WEST VIRGINIA

### Soils

The natural vegetation of a site is an indication of the suitability of the site for blueberries. Wild blueberries, huckleberries, azaleas, laurel, native spiraea or hardhack are all plants that grown on soils adapted for blueberries. If your soil is not obviously adapted, several measures must be taken for a successful planting. So first, have the soil tested by the West Virginia University Soil Testing lab. It is a free and valuable service.

Blueberries require soils with high organic matter. Composts containing black peat, sawdust, animal manures, plant and kitchen residues may be added to the planting hole to increase the organic matter around the roots. These materials are also useful as mulch around the plant to control weeds and conserve moisture. Six inches of mulch should be applied and at least an inch replaced annually, to the soil around the plant.

Blueberries have shallow roots and require frequent watering or irrigation, but they also do not like having wet feet, so be sure the soil is well-drained. If the soil is not well-drained, hilling the planting row a foot or so above the aisle will help keep the roots out of standing water. Blueberries grow in acidic soil in a range of pH from 4.0 to 5.2 with the optimum from 4.5 to 4.8. It is best to choose a site with soils close to the desired pH. If slightly out-of-range, you can use flour-of-sulfur to adjust the pH downward. We do not recommend this practice for soils with pH 5.5 or higher.

lb. of sulfur(S) needed for 100 sq. ft. to lower pH to 4.5		
present pH of soil	soils with sandy texture	soils with loamy texture
5.0	0.4	1.2
5.5	0.8	2.4
6.0	1.2	3.5
6.5	1.5	4.6
7.0	1.9	5.8

Preparing the soil for planting is very much the same as preparing for a home garden. Have the soil tested in the fall, and spade or disk in the recommended fertilizer immediately so as to attain a satisfactory maintenance fertility level within the top 6-8 inches. Deep tillage by spading or disking (12-15") will help correct soil compaction and improve soil structure for better air and water movement and deeper root growth. Cover crops or legume sod should be plowed down late in the fall or early in the spring. After planting, no fertilizer should be applied until growth has started. Apply 10-10-10 at 100 lbs/A (2 1/2 lbs/100 ft row, or 2 oz/plant) when growth starts, and a further 100 lbs/A of ammonium sulfate six weeks later. The second year apply

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10-10-10 at 200 lbs/A and two applications of ammonium sulfate at 100 lbs/A at 6-week intervals. The third year, apply 10-10-10 at 300 lbs/A plus the two applications of ammonium sulfate at 6-week intervals. The fertilizer application should be increased each year until mature bushes (six years) are receiving about two pounds per plant per year. These amounts should be halved if no mulch is applied. The fertilizer should be applied in a uniform application over the mulch. Fertilizers with 2% magnesium oxide (look for a fourth number on the bag, such as 10-10-10-2) are recommended, if available.

One of the most common deficiency symptoms seen in blueberry is iron chlorosis. This is characterized by a yellowing or interveinal chlorosis of the leaves. The veins remain green and it is first noticed on the young shoots. Only in advanced stages is the yellowing seen on older leaves. Iron chelate worked into the soil about the base of the plant or applied to the leaves should eliminate these symptoms within a month. Other possible deficiency symptoms should be analyzed by your extension specialist or diagnosed by plant tissue analysis.

For further information regarding culture and maintenance, ask your extension agent for the revised Miscellaneous Publication 61, Blueberries for West Virginia.

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