

Recommendations for Brambles

Nitrogen (N)

Low N (if N is below 2.00). Increase the rate of nitrogen application by 10% for each 0.1% that the sample is below the desired level. The best source of nitrogen is ammonium nitrate. Fall fruit types should be near the high end of the range. Apply nitrogen prior to April 20 (Table 9-4).

High N (if N is above 3.00). Reduce the rate of the nitrogen application by 10% for each 0.1% that sample exceeds desired level.

Phosphorus (P)

Low P (if P is below 0.25). Apply 200 lbs/acre 45% superphosphate at any time to the soil surface.

High P (if P is above 0.40). Omit phosphate from the fertilizer program.

Potassium (K)

Low K (if K is below 1.50). Apply 90, 100, 140, 180, or 200 lbs/acre potassium sulfate for soil management groups I, II, III, IV, and V, respectively (I = clay; V = sand). If Mg is also low, sulfate of potash-magnesia (sul-po-mag) may be used at 2.5 times the above rates. Do not use muriate of potash.

High K (if K is above 2.50). Discontinue use of potassium fertilizer.

Calcium (Ca)

High Ca (if Ca is below 0.60). Apply lime as needed if pH is less than 6.0. See soil test recommendations for adjustment of the soil pH. If pH is greater than 6.0, apply 1,000 lbs/acre calcium sulfate.

Low Ca (if Ca is above 2.50). May indicate improper soil pH. See soil-test recommendations for adjustment.

Magnesium (Mg)

Low Mg (if Mg is below 0.30). If pH is below 6.0, apply dolomitic limestone according to soil-test recommendations. If not, apply 200 lbs/acre magnesium sulfate (Epsom salts) OR sulfate of potash-magnesia (sul-po-mag) to soil surface in late fall or early spring. Three foliar sprays of magnesium sulfate at 15 lbs/100 gal/acre or MgO at 3 lb/100 gal/acre at leaf expansion, after harvest, and in late summer will temporarily correct the deficiency.

High Mg (if Mg is above 0.90). Omit use of magnesium.

Manganese (Mn)

Low Mn (if Mn is below 50). Apply a spray of manganese sulfate (2 lbs/100 gal/acre) or manganese

Table 9-4. Specific Element Recommendations for Brambles from Leaves.

Element	Deficient	Below Normal	Normal	Above Normal	Excessive
N (%)	1.80	2.00	2.50	3.00	>3.00
P (%)	0.24	0.25	0.35	0.40	>0.40
K (%)	1.45	1.50	2.00	2.50	>2.50
Ca (%)	0.59	0.60	1.70	2.50	>2.50
Mg (%)	0.29	0.30	0.70	0.90	>0.90
Mn (ppm)	45	50	150	200	>200
Fe (ppm)	48	50	150	200	>200
Cu (ppm)	6	7	30	50	>50
B (ppm)	24	25	40	50	>50
Zn (ppm)	18	20	35	50	>50

Source: Cornell University. Used with permission.



chelate (6 lbs/100 gal/acre) after harvest, but before September 15. Check soil pH. For fall fruiting types, apply in June.

High Mn (if Mn is above 200). May indicate a low soil pH or contamination by fungicide or irrigation water. Consult soil-test recommendations to determine need for lime.

Iron (Fe)

Low Fe (if Fe is below 50). Apply 4 lbs/100 gal/acre ferrous sulfate or 8 lbs/100 gal/acre iron chelate as a foliar spray between harvest and September 15. For fall fruiting types, apply in June. If the condition persists for several consecutive years and the soil pH is within the desired range, apply 25 lb/acre iron chelate or 15 lb/acre ferrous sulfate to soil in early spring.

High Fe (if Fe is above 200). Toxicity may occur if levels exceed 250 ppm. Contamination from sprays may give artificially high readings.

Copper (Cu)

Low Cu (if Cu is below 7). Apply copper chelate (4 lbs/100 gal/acre) in a foliar spray during leaf expansion in May. If the condition persists for several consecutive years and soil pH is within the desired range, apply 20 lb/acre copper sulfate to the soil in late fall.

High Cu (if Cu is above 50). A low soil pH or contamination from sprays may be indicated. Consult soil test recommendations to determine the need for lime.

Boron (B)

Low B (if B is below 25). Apply Solubor to the soil in early spring at 4.0 lbs/acre OR apply a foliar spray of Solubor (20% actual Boron) at the rate of 1.5 lb. product/100 gal/acre in early spring. For summer bearers, apply again after harvest.

High B. Discontinue use of Boron. Toxicity may occur if levels exceed 100 ppm.

Zinc (Zn)

Low Zn (if Zn is below 20). Apply 3 lb/100 gal/acre zinc chelate at leaf expansion and after harvest

in foliar sprays. For all fruit types, apply in May and early July. If the condition persists for several consecutive years and soil pH is within the desired range, apply 10 lb/acre zinc sulfate to the soil in the fall.

High Zn (if Zn is above 50). May be indicative of fungicide contamination. Toxicity may occur if levels exceed 300 ppm.

Recommendations for Blueberries

Nitrogen (N)

Low N (if N is below 1.70). Increase the rate of nitrogen application by 10% for each 0.1% that sample is below the desired level. If soil pH is above 5.0, use ammonium sulfate; if below 5.0, use urea. Do not use ammonium nitrate or chloride fertilizers. Apply no later than April 20 (Table 9-5).

High N (if N is above 2.10). Reduce the rate of nitrogen application by 10% for each 0.1% that the sample exceeds the desired level. If the soil pH is above 5.0, use ammonium sulfate; if below 5.0, use urea. Do not use ammonium nitrate or chloride fertilizers.

Phosphorus (P)

Low P (below 0.10). Apply 180 lbs/acre 45% superphosphate at any time.

High P (above 0.18). Omit phosphate from the fertilizer program.

Potassium (K)

Low K (below 0.35). Apply 400 lbs/acre potassium magnesium sulfate or 160 lbs/acre potassium sulfate in fall or early spring.

Calcium (Ca)

Low Ca (below 0.40). Refer to the soil test and apply lime as needed, if soil pH is below 4.0. Apply 1,000 lbs/acre calcium sulfate in fall or early spring if pH is above 4.0.

High Ca (above 0.80). Refer to the soil test recommendations for pH adjustment.

