



Soil Test Note 22: Small Fruits for Home Use

Prepared by: Jayesh Samtani, Small Fruit Extension Specialist; Tony Wolf, Professor of Viticulture; Rory Maguire, Extension Nutrient Management Specialist; and Steve Heckendorn, Soil Testing Laboratory Manager

Introduction

Small fruits thrive best in fertile, sandy loam soil high in organic matter, but they will give good returns on the average garden soil under adequate fertilization and good cultural practices.

Your soil test report provides information on the amount of lime (or sulfur) required for optimum plant growth and also indicates whether a Complete or Nitrogen-Only fertilizer will be needed. Since the amount of fertilizer to apply depends on the small fruit to be grown and the age of the plant, separate recommendations are listed in this leaflet for each small fruit.

Strawberries

Before Planting

If your Soil Test Report indicates that a complete fertilizer is needed, broadcast 1.5 lb of 10-10-10 fertilizer (3 cups) per 100 sq. ft. Rototill or spade fertilizer 5 inches deep into soil before planting.

If a complete fertilizer is not needed, nitrogen should be applied at the rate of 1 lb of calcium nitrate (2 cups) per 100 sq. ft. to help establish the new planting.

Established Strawberry Patches in Spring

Silt Loams, clays, clay loams - spring fertilization is not recommended on these soils since there is a danger of excessive growth which results in reduced yield and poorer quality fruit.

Sandy soils- Due to rapid nutrient leaching on these soils, spring fertilizer applications are normally

beneficial. If your Soil Test Report indicates that a complete fertilizer is needed, apply 2 lb of 10-10-10 fertilizer (4 cups) per 100 ft of row directly over the row. Brush fertilizer off plants and, preferably, apply on a dry afternoon.

If a complete fertilizer is not needed, nitrogen should be applied at the rate of 1.5 lb of calcium nitrate (3 cups) per 100 feet of row directly over the row. Brush fertilizer off plants and, if possible, apply fertilizer on a dry afternoon.

Established Strawberry Patches After Picking – Late Summer

If soil test report indicates that a complete fertilizer is needed, apply 2 lb of 10-10-10 fertilizer (4 cups) per 100 feet of row directly over the row. Brush fertilizer off plants and, preferably, apply fertilizer on a dry afternoon.

If a complete fertilizer is not needed, nitrogen should be applied at the rate of 1.5 lb of calcium nitrate (3 cups) per 100 feet of row directly over the row. Brush fertilizer off plants and, if possible, apply fertilizer on a dry afternoon.

Grapevines

First Year

Fertilizer is not recommended at the time of planting if the site was properly limed and adjusted for nutrients prior to planting. Nitrogen fertilizer may be applied about one month after growth has begun if the soil is low in organic matter (<2%) and no additional nitrogen was previously applied. Nitrogen could be applied at the rate of 3 oz. of calcium nitrate (1/3 cup) in a circle 12 inches from the base

of each vine. Repeat the fertilizer application about 6 weeks later.

Second Year

Apply fertilizer just after growth commences in the spring. If the soil test report indicates that a complete fertilizer is needed, apply 6 oz. of 10-10-10 fertilizer (2/3 cup) in a circle around each vine about 12 inches from the trunk. If a complete fertilizer is not needed, nitrogen can be applied at the rate of 3 oz. of calcium nitrate (1/3 cup) in a circle 12 inches from the base of each vine.

Third and Subsequent Years

Fertilizer application may be warranted with infertile soil. Fertilizer will not, however, compensate for poor weed management or drought. If the average cane growth in year-two was 3 feet or less, additional nitrogen might be needed. However, where proper pruning is practiced and competition from weeds and grass is kept to a minimum, vines may not require additional fertilizer in year-three. Fertilization after this point is based on observation of vine growth (weak to vigorous), leaf coloration and apparent nutrient deficiency symptoms, and fruit-set and crop level. Large, heavily cropped vines might benefit from annual, maintenance applications of 4 to 6 oz. of calcium nitrate per vine, applied as indicated above. Complete fertilizers, such as 10-10-10, are rarely needed, but can be used instead of calcium nitrate.

Raspberries and Blackberries

Apply fertilizer when growth begins in spring. If the soil test report indicates that a complete fertilizer is needed, apply 3 lb of 10-10-10 fertilizer (6 cups) per 100 feet of row. If a complete fertilizer is not needed, nitrogen should be applied at the rate of 2 lb of calcium nitrate (4 cups) per 100 feet of row.

Blueberries

First Year

Fertilization of blueberries is not recommended at the time of planting. However, fertilizer may be applied about one month after growth has been initiated. If the soil test report indicates that a complete fertilizer is needed, apply 4 oz. (1/2 cup) of

10-10-10 fertilizer in a circle around each plant about 8 inches from its base. If a complete fertilizer is not needed, nitrogen should be applied at the rate of 2 oz. (1/4 cup) of ammonium sulfate in a circle 8 inches from each plant. Cottonseed meal, an organic fertilizer preferred by many home gardeners, may be used instead of ammonium sulfate at the rate of 8 oz. (1 cup) per plant.

Second and Subsequent Years

Fertilizer should be applied to established blueberry bushes just before the buds begin to swell each spring. If the soil test report indicates that a complete fertilizer is needed, apply 2 oz. (1/4 cup) of 10-10-10 fertilizer for each year of growth up to a total of 16 oz. annually. (For example, if bushes are 4 years old, 8 oz. of 10-10-10 fertilizer will be needed). If a complete fertilizer is not needed, nitrogen should be applied at the rate of 1 oz. (1/8 cup) of ammonium sulfate for each year of growth up to a total of 8 oz. annually. If desired, cottonseed meal may be used in place of ammonium sulfate at the rate of 8 oz. (1 cup) per plant for nonbearing bushes and 1 lb (2 cups) per plant for bearing bushes. Apply fertilizer in a circle around each plant approximately 8 inches from its base.

Currants and Gooseberries

Currants and gooseberries are alternate hosts to the white pine blister rust disease. Since they are instrumental in the spread of this disease, their planting is restricted in many areas of Virginia. Before planting either of these fruits, contact your local Virginia Cooperative Extension Agent for regulations governing their production and shipment.

Apply fertilizer just before the buds begin to swell in the spring. If the soil test report indicates that a complete fertilizer is needed, apply 1 lb (2 cups) of 10-10-10 fertilizer in a circle around each plant about 8 inches from its base. If a complete fertilizer is not needed, then nitrogen should be applied at the rate of 8 oz. (1 cup) of nitrate of soda in a circle 8 inches from each plant.

Mulching

Many small fruits are mulched to conserve moisture, check weed growth and add organic matter to the soil. Nearly any organic materials makes good mulch – straw, hay, pine needles, leaves, crushed corncobs, peat moss or sawdust. In general, mulches

should be applied to a depth of about 4 inches around each plant except for sawdust where 2 inches is sufficient. In some instances where the mulch is mixed in with the soil, a temporary nitrogen deficiency may occur as the mulch begins to decay. Should this occur, it can be quickly overcome through the application of 8 oz (1 cup) of nitrate of soda to each 100 sq ft of mulched area.

Black plastic may also be used as mulch if desired. It serves to conserve moisture and check weed growth, but does not add to the humus content of the soil upon deterioration.

Table 1. Use of Different Fertilizer Materials

If a recommended fertilizer is not available locally, one of the following fertilizers may be substituted:

Recommended Fertilizer	Substitute	Use Substitute at:
10-10-10	5-10-5	Double recommended rate
10-10-10	5-10-10	Double recommended rate
10-10-10	10-6-4	Same rate
Nitrate of Soda	Ammonium Nitrate	1/2 recommended rate
Nitrate of Soda	Urea	1/3 recommended rate
Calcium Nitrate	Sodium Nitrate	Same rate
Ammonium Sulfate	Nitrate of Soda	Same rate
Ammonium Sulfate	Ammonium Nitrate	1/2 recommended rate

If you desire to use a fertilizer that is not listed above, check first with your local extension agent before using. Improper fertilizer use may burn foliage or cause excessive foliage growth and often does more harm than good.

Additional Information

For more information, consult *Small Fruit in the Home Garden*, Virginia Cooperative Extension (VCE) publication 426-840 at resources.ext.vt.edu or contact your local VCE office. Contact information for your local Extension office appears on the upper left of a soil test report.

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