

Strawberries

—Establishment

Broadcast the recommended rates of lime, N, P₂O₅ and K₂O before plowing. Do not apply additional fertilizer when you set out plants in the spring. Thirty days after setting, sidedress with 30 lb N per acre. Topdress with another 40 lb N per acre in September.

—Maintenance

a. If you limed and fertilized the strawberry crop at establishment according to soil test recommendations, follow this fertilization schedule.

- Soon after harvest in the first bearing year, topdress with 30 lb N, P₂O₅ and K₂O per acre.
- In August, topdress with another 40–60 lb N per acre.
- Before the second bearing year, have the soil tested again.

b. If you did not lime and fertilize the crop at planting according to soil test recommendations, follow this fertilization schedule.

- Have the soil tested.
- Broadcast any recommended lime as soon as possible.
- Soon after harvest, apply the recommended P₂O₅ and K₂O along with 30 lb N per acre.
- In August, broadcast 40–60 lb N per acre.
- In January or February, some N may be needed on extremely sandy soils. In this case, topdress about 20 lb N per acre. However, limit the N applied to avoid excessive vegetative growth before harvest and soft berries.

**Additional information
can be obtained from
an NCDA&CS regional agronomist
or the local Cooperative Extension office.**



North Carolina Department of Agriculture and Consumer Services

Steve Troxler, Commissioner of Agriculture

NCDA&CS Agronomic Division

Dr. Colleen M. Hudak-Wise, Director

www.ncagr.gov/agronomi/

(919) 733-2655

Mailing Address

**1040 Mail Service Center
Raleigh NC 27699-1040**

Physical Address / Location

**4300 Reedy Creek Road
Raleigh NC 27607-6465**



reprinted May 2008

NOTE 18: Fertilization of Small Fruits



All fruiting plants require fertile soil with a reasonable balance of nutrients. The lime and fertilizer rates recommended on your NCDA&CS soil test report serve this purpose. Precise fertility management for fruit crops requires plant tissue analyses as well as soil tests. However, some basic nutrient management guidelines for common small fruit crops are provided here.

Blueberries

—Establishment

Take a soil sample prior to establishment to determine pH and fertilizer needs. No lime should be applied to blueberries, except in special cases, and then only on the advice of a qualified consultant.

Broadcast any recommended fertilizer prior to preparing the land for setting. Set the plants without further additions of fertilizer. In early April, or after the first flush of growth, broadcast additional nitrogen (N) at the rate of 10–15 lb N per acre using a 1-1-1 or 1-2-1 ratio material (100–150 lb 10-10-10 or 200–300 lb 5-10-5). Repeat the topdressing four to six weeks later with 20–30 lb N from the same 1-1-1 or 1-2-1 ratio material.

—Maintenance

a. If you applied fertilizer according to soil test recommendations at the time of establishment, follow this fertilization schedule.

SECOND YEAR

- Prior to bloom, broadcast 20 lb N per acre from a 1-1-1 or a 1-2-1 ratio material (200 lb 10-10-10 or 330 lb 6-12-6).
- Six weeks later, repeat the topdressing, but increase the rate to 30 lb N per acre (300 lb 10-10-10 or 500 lb 6-12-6).

- After another four to six weeks, apply an additional 30 lb N. Nitrogen alone may be applied at this time, but the same mixed material may be used, if desired.

WHEN PLANTS ARE MATURE

- Prior to bloom, broadcast 30 lb N per acre from a 1-1-1 or 1-2-1 ratio material (300 lb 10-10-10 or 500 lb 6-12-6).
- Six weeks later, repeat the prebloom topdressing.
- Any time after harvest or up to mid-July, topdress with an additional 20–30 lb N per acre. Materials containing N only can be used at this time.
- Have the soil tested at least once every three years.

b. If you did not fertilize your blueberry crop according to soil test recommendations at the time of establishment, follow this fertilization schedule.

- Have the soil tested.
- Prior to bloom, broadcast the recommended rates of P₂O₅ and K₂O along with 20–30 lb N per acre.
- For the rest of the season, continue with the appropriate schedule outlined in section **a.** above.

Grapes

—Establishment

Broadcast the recommended rates of lime, P₂O₅ and K₂O before plowing. Then proceed with the setting operation without additional fertilizer. After growth starts, sidedress with a 1-1-1 ratio material to supply 0.02–0.03 lb N per plant (4 oz 12-12-12). Broadcast the fertilizer in a circle 18–20 inches from each vine. Repeat at monthly intervals until July. A 1-0-1 ratio material, such as 14-0-14, may be used for the later topdressing, if desired.

—Maintenance

a. If you applied lime and fertilizer to your crop at establishment according to soil test recommendations, follow this fertilization schedule.

SECOND YEAR

- In March, apply 0.06 lb N from a 1-1-1 ratio material (0.5 lb 12-12-12) around each vine. Broadcast it in a 12-inch band beginning 24 inches from the vine.
- Repeat monthly until mid-July.

THIRD YEAR

- In early March, broadcast 40 lb N, P₂O₅ and K₂O per acre. Use a 1-1-1 ratio material equivalent to 330 lb of 12-12-12 grade per acre.
- In May, apply another 30 lb N and K₂O per acre (equivalent to about 200 lb of 14-0-14).

WHEN VINES START TO BEAR

- Have the soil tested again.
- Broadcast the recommended lime as soon as possible.
- In early March, apply the recommended rates of P₂O₅ and K₂O along with 60 lb of N.
- In May, broadcast an additional 30 lb N per acre if vine growth is too slow.
- In July, broadcast another 20–30 lb N per acre.

b. If you did not apply lime and fertilizer according to soil test recommendations at establishment, follow this fertilization schedule.

- Have the soil tested.
- Broadcast the recommended lime as soon as possible.
- In early March, apply the recommended rates of P₂O₅ and K₂O along with the appropriate rate of N based on the age of the vines as outlined above.
- Continue with the appropriate maintenance schedule, which includes taking a soil test at least every three years.

Grape vineyards on sandy soils are susceptible to boron (B) deficiency, especially in dry weather and at a soil pH of 6.5 and higher. The application rate should not exceed 1 lb B per acre every two years (10 lb ordinary borax, 11.3% B; or 7 lb fertilizer borate, 14.3% B). Boron can be supplied as a foliar spray each year, if this is more desirable. In this case, the rate should not exceed 0.2 lb B per acre per year

(1 lb Solubor, 20.2% B; or 1.7 lb ordinary borax, 11.3% B). Plant tissue tests can be used to determine its need.

Continued use of boron at rates higher than those suggested may lead to an accumulation of toxic amounts in the soil.

Raspberries & Blackberries

—Establishment

Broadcast any recommended lime, P₂O₅ and K₂O along with 30 lb N per acre before plowing. Do not add additional fertilizer when plants are set out. In July, topdress with additional nitrogen at the rate of 30 lb per acre.

—Maintenance

a. If you limed and fertilized the crop at setting according to soil test recommendations, follow this fertilization schedule.

- In March, broadcast 40 lb N, 40 lb P₂O₅ and 80 lb K₂O per acre.
- In July, topdress with additional N at the rate of 60–80 lb per acre.

b. If you did not lime and fertilize the crop at setting according to soil test recommendations, follow this fertilization schedule.

- Have the soil tested.
- Broadcast any recommended lime as soon as possible.
- In March, apply the recommended rates of P₂O₅ and K₂O along with 40 lb N per acre.
- In July, topdress with N at the rate of 60–80 lb per acre.
- The following year, use the maintenance schedule outlined under **a.** above.
- Have the soil tested at least once every three years.