

Growing Small Fruits

Instructions For
4-H CLUB MEMBERS

NORTH CAROLINA STATE COLLEGE OF AGRICULTURE AND ENGINEERING
OF THE
UNIVERSITY OF NORTH CAROLINA
AND
U. S. DEPARTMENT OF AGRICULTURE, CO-OPERATING
I. O. SCHAUB, DIRECTOR
STATE COLLEGE STATION
RALEIGH

STRAWBERRY CULTURE

By H. R. NISWONGER
Extension Horticulturist

ESTABLISHING A STRAWBERRY PLANTING FOR HOME USE

Directions for 4-H Club Members

Varieties to Plant. Eastern North Carolina—Blakemore, Dorsett, or Fairfax. Western North Carolina—Premier, Dorsett or Fairfax. For late berries plant Big Joe for the East and Chesapeake for the West.

Number of Plants to Set. Set 100 to 300 plants of one or more of the above varieties.

When to Set. Set plants during September and October in eastern Carolina and in western Carolina during March and April after periods of soil freezing and thawing have passed.

Soil Requirements. Any good well drained garden soil will produce strawberries. Do not set plants in newly plowed sod land on account of presence of grub worms which damage the plants. Broadcast a liberal application of stable manure before plowing land. Prepare soil as for growing vegetable crops.

Setting Plants. Set plants around 2 feet apart in 3 foot rows. Remove large leaves and others showing the leaf spot disease. Keep roots covered with a wet sack while plants are being set in order to prevent drying out. Set plants in the ground at level with the crown and with roots well spread out. Press the soil firmly about the plant.

Cultivation and Fertilization. Cultivate thoroughly in the early part of the season so that the plants can become established in the soil. Keep blossoms picked off to prevent checking of growth of newly set plants. Space the runner plants about six inches apart in the plant row and do not allow them to take root in the middles. Remove all superfluous plants after the row has been filled with new plants. More large berries can be produced by keeping the plants from becoming matted in the row.

When the newly set plants begin to form runner plants broadcast 5 pounds of 5-7-5 fertilizer per 100 feet of row over the plant row and work it in with the hoe.

Fall and Winter Culture Practices. In November or December topdress the strawberry bed with 8 pounds of 5-7-5 commercial fertilizer per 100 feet of row. Mulch plants after the first of the year with pine needles or wheat straw. Mulching will smother out spring growth of weeds, conserve moisture and keep the berries free from dirt.

Reference—FRUITS AND NUTS FOR HOME USE

N. C. Ext. Circ. No. 210.

ESTABLISHING A VINEYARD

By H. R. NISWONGER
Extension Horticulturist

DIRECTIONS FOR 4-H CLUB MEMBERS

Vineyard of Bunch Varieties

Varieties: Worden (black), *Concord (black), or Cynthiana (black), Delaware (red), Niagara (white), Lucile (red), or Lutie (red), and *Catawba (red).

Varieties marked (*) are self-sterile and will not set fruit unless planted near the other varieties named in the above. The Cynthiana and Delaware are good for wine purposes to which may be added other wine varieties such as the Ives, Clinton or Norton.

Number of Plants to Set. For adults. Set a minimum of 10 plants for home use. For 4-H Club members 5 to 10 plants for home use. For commercial purposes as for sale on curb or roadside market set a minimum of 100 plants.

Kind of Plants to Set. Vigorous plants with one year old roots are generally the most suitable.

Setting the Plants. Planting may be done in early spring or during mild weather periods in the winter. All dead roots should be cut off and the others shortened 8 to 10 inches. Dig the hole large enough to allow roots to be well spread out and set plant slightly deeper than it stood in nursery row. Set plants 10 feet apart in 8 foot rows.

Location of Planting. Grape is a lover of sunshine and does not do well in a shady location. For commercial planting higher areas and slopes are preferable to level lands and low places in order to avoid damage from late spring freezes and frosts. The ideal soil for grapes is a well-drained open soil. Light sands and heavy, sticky clay soils are unfavorable. The sandy loams, gravelly clays and gravelly loams often give the best results.

First Year's Pruning and Training. Support for Vines: Posts and wires are used for support. Select posts 7 to 8 feet long and use No. 10 or 12 wire. Set the posts 30 feet apart. Set the first plant 5 feet from the end support, the second and third plants 10 feet apart. This will give three plants between post. Stretch the bottom wire to the posts $2\frac{1}{2}$ to 3 feet from the ground and the upper wire two feet higher. Drive a stake (long enough to reach the top wire) into the ground at each grape plant. Cut back the strongest and most upright shoot on the young vine to two buds. Remove entirely all other shoots. Under good growing conditions this shoot will grow three to five feet the first season and produce some short laterals. The shoot should be tied to the stake as it develops in order to develop one straight cane. When laterals or side shoots develop near the wires, one each should be trained to the wires in opposite directions.

Cultivation and Fertilization. Hoe around base of plants to provide a mulch and keep down weeds. Sow peas or beans between grape rows for turning under. Apply to each plant a tablespoonful of nitrate of soda after buds open, making application at a distance of one foot from grape vine.

Reference—FRUITS AND NUTS FOR HOME USE

N. C. Exp. Circ. No. 210.

ESTABLISHING A RASPBERRY PLANTING FOR HOME USE

By H. R. NISWONGER
Extension Horticulturist

FOR 4-H CLUB MEMBERS

Varieties to Plant. Piedmont and Western Carolina. Red Raspberry—St. Regis and Latham variety. Black Raspberry—Cumberland variety.

Varieties to Plant. Sandhill area and Eastern Carolina. Dixie red raspberry.

Number of Plants to Set. 4-H Club Members. Set a total of 15 plants of the red and black varieties or 15 plants of one of the varieties. Adults. Set a total of 25 plants of both kinds of the red varieties and the black variety or 25 plants of either the red or the black kind.

When to Set Plants. Set in February and March.

Planting Distances. Set plants 5 feet apart in 6 foot rows in order to develop the hill system of culture.

Soil Requirements. Good garden soil rich in humus is needed. Good sub-soil drainage is necessary. Avoid soil which will bake after a hard rain. A fine, deep sandy loam is perhaps the most desirable.

Culture

Prepare the soil to a fine mellow condition as deep as the land was plowed. Broadcast a liberal application of stable manure and acid phosphate before plowing. The raspberry plants should be cut back to a height of a few inches after planting. Black raspberries have a piece of last year's cane attached to the new plant. This cane should be removed or entirely covered with soil when plants are set in order to prevent spread of the anthracnose disease. Set plants slightly deeper than they formerly grew. On light soils set several inches deeper than they grew before. After the plants have become established or after growth starts, scatter a tablespoonful of nitrate of soda around each plant not closer to the plant than one foot. Cultivation must be continuous throughout the growing season. Shallow cultivation must be maintained around each plant. Do not use a hoe as the young canes that come from the crown of the plant may be cut off before they appear above the ground. A garden weeder which just loosens the soil is preferred.

The red raspberry canes which develop from the new plant do not need pruning during the current season. When the young canes of the black raspberry reach a height of 2 feet they should have the terminal bud pinched out. This will force out strong side branches.

Before growth starts the following spring, pull up all the weak canes. Prune off or head back one third of growth of each red raspberry cane. Head back the black raspberry canes at a height of 3 to 5 feet and cut back the side branches to a length of 6 to 8 inches.

Reference—FRUITS AND NUTS FOR HOME USE

N. C. Ext. Circ. No. 210.

HANDLING DEWBERRIES FOR HOME USE

By L. P. WATSON
Extension Horticulturist

FOR 4-H CLUB MEMBERS

Varieties to Plant. The Youngberry and the Boysenberry are the recommended varieties. These varieties are of exceptionally high quality but are so juicy that they cannot be handled a great deal, therefore are recommended for local use only.

Number of Plants to Set. It is suggested that 25 to 30 plants be set the first year. The tips of the canes root very readily and the number can be increased as the demand warrants.

Time to Plant. Plants should be set in February or March.

Distance of Planting. Since these are very vigorous varieties they should be planted 6 feet apart.

Soil. For best quality and production, the soil should be reasonably fertile, well drained and with enough humus to hold moisture and fertility.

Setting the Plants. The plants should be cut back to two or three buds when they are set. The soil should be shaken in well about the fine roots and thoroughly packed, placing some loose soil on top to prevent baking.

Culture

After the plants begin growth in the spring the first year side dress each plant with 1 tablespoon full of nitrate of soda. In July side dress with about $\frac{1}{4}$ pound of 5-7-5. Allow the canes to remain on the ground during the first summer and winter. The canes should be tied up on a stake driven in the ground near the plant just before growth starts the second spring. When they are tied up fertilize with $\frac{1}{2}$ pound of 5-7-5. After the crop has been harvested cut off all the old canes at the ground level and fertilize with a second application of $\frac{1}{2}$ lb. of 5-7-5. Allow the new canes to remain on the ground until the following spring and repeat the procedure as outlined. Cultivation should be frequent to keep down weeds but great care should be exercised not to break off the young canes which have not come through. If 30 plants are set 6 x 6 feet, mulch the entire soil area with around 4 bales of straw or similar material. Sawdust or shavings may be used making the mulch about 4 to 6 inches deep.

In tying the canes around the stake a soft string or preferably a piece of cloth should be used. Do not tie too tight as this will cut the canes.

Reference—FRUITS AND NUTS FOR HOME USE
N. C. Ext. Circ. No. 210.