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The Scuppernong Grape

ITS GROWTH and CARE UNDER
VINEYARD CONDITIONS

By R. C. COOL, MANAGER
SOUTHERN PINES GRAPE
NURSERIES

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PREFACE

A great deal of interest has been awakened in the last few years in the commercial growing of Scuppernong Grapes. The prices for these grapes have averaged unusually high and the demand for them is greatly in excess of the supply. More thought and study are being given to the growing of Scuppernongs than ever before, and a demand for more knowledge regarding them has led to the publishing of this booklet.

In compiling this, the writer has endeavored to eliminate the theoretical and technical as much as possible and to present the subject only from a practical and workable standpoint.

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THE SCUPPERNONG GRAPE

HISTORY

There is some question as to the place of origin of the Scuppernong Grape, some authorities claiming that the first vine was found on Roanoke Island, in eastern North Carolina, and others, that the first vine came from Tyrrell County, North Carolina. There are very old vineyards in both places, known to be considerably over a hundred years old, and it will probably be hard to prove whether the Roanoke Island vines came from Tyrrell County or whether the Tyrrell County vines were brought from Roanoke Island. These vineyards were both established by the earliest settlers, and, from a practical standpoint, it does not matter a great deal which is the older.

All authorities agree that the Scuppernong is of the pure *Rotundifolia* Species. This species grows wild in the woods all through the coastal plain country from Southern Virginia to Florida, and extends as far West as the edge of the Piedmont section in North Carolina. Wherever the wild *Rotundifolias* grow, the Scuppernong has been introduced and thrives. Today there are very few homes in the east coast country that do not have one or more Scuppernong vines.

FRUIT AND VINE

The Scuppernong is different from the other grapes of the *Rotundifolia* family in that it is white, or rather, bronze in color, while the other varieties are black. The grapes are large in size, and grow two to ten in a bunch.

The vine is an exceptionally strong grower, and its wood is the hardest of the grape family.

There are no insect enemies, or fungus diseases that attack the fruit.

The black rot sometimes attacks the leaves in the spring, but never enough to affect the growth of the vines, or to cause any apparent detriment to a vine that is given proper care.

The blooms open during the first part of June, and the grapes ripen during September.

SOILS

It is the tendency of the Scuppernong on heavy, or very fertile soils, to run to vine at the expense of the fruit. It thrives on the bare beach sand along the coast, and it is our experience that best results, under vineyard conditions, can be secured on sandy soils with sand or sand-clay subsoils. Here the drainage is good and there is no danger of the soil baking in dry weather. The growth of vine can be regulated by the proper use of fertilizers, as the roots are very near the surface and respond quickly to fertilization.

There are thousands of acres of this character of land in Eastern North Carolina, very little of which is under cultivation, as it is usually considered of little value for most crops. However, these lands in grapes will produce several times the net profit per acre that the best lands can possibly produce in cotton, corn, wheat, or other staple crops.

ARBORS VERSUS TRELLISES

Within the last five to ten years some experiments have been made in growing Scuppernongs and other varieties of the *Rotundifolia* Species on upright trellises, pruning and training as other grapes are pruned and trained. Aside from this, these grapes have always been grown on overhead arbors, without special pruning or training. There are a few who advocate the trial of the trellis system, but, from what we have seen of its use, we are confident that the trellis will never compete with the overhead arbor for a commercial Scuppernong vineyard, and we do not recommend its use by any one except in an experimental way. Our reasons for making this statement are:

1. The vine does not take kindly to the severe pruning that is necessary to keep it within bounds on a trellis; its tendency is to run to vine at the expense of the fruit.

2. Because of the severe pruning necessary on the trellis, the grapes do not ripen evenly.

3. On an overhead arbor, the Scuppernong will keep itself pruned to young, bearing wood more effectually than can possibly be done by hand pruning, thus eliminating a great deal of labor and expense, and at the same time adding to the size of the crop. Unlike most fruits, the Scuppernong can mature a full crop every year without detriment to the vine.

4. There is no need of keeping the vine in bounds for the purpose of spraying. There are no insects or diseases that attack the fruit and the black rot cannot materially hurt the leaves in a well-kept vineyard.

5. Where the trellis system has been tried in commercial vineyards, in comparison with vines grown on arbors, the trellis system has soon been given up.

6. Very little experience is required to make a success of a vineyard on overhead arbors, while, with the trellis system, a great deal of labor and a large amount of technical knowledge are necessary.

7. A paying crop can be secured quicker on the arbors than on the trellis.

8. We know that large yields can be obtained at a minimum of expense from an arbored vineyard, and there are many vines over a hundred years old, still bearing heavy crops annually, giving abundant proof that the arbor system is thoroughly practical. The trellis is still an experiment.

The original expense of a vineyard on arbors is slightly greater than with trellises, but this is a great deal more than offset by the saving in annual expense and upkeep.

FILLERS

The value of fillers is recognized in many branches of fruit growing. In establishing an orchard of apples or pecans, peaches are very often used between the other trees to make a quicker return

from the use of the land. Scuppernong vines, when ten to twelve years old, will cover a large area of land, so that permanent vines in a vineyard should be planted at least twenty to thirty feet apart each way. On light sand lands, twenty feet is found to be about right, and when planting them this distance, we set additional vines as fillers, which are taken out when the tops get too crowded. These fillers will stand from six to eight years, and should more than pay all costs of the vineyard before they have to be removed. A Scuppernong comes into bearing at three years after setting, and the fillers will yield three to six crops before being taken out. In setting a vineyard, we put the vines ten feet apart each way, allowing four hundred and thirty-two to the acre, one hundred and eight of which are permanent vines. In this way we get four times as great a yield the first few years of bearing. The cost of the additional vines used as fillers is not great, and the cost of arboring and care is practically the same for the four hundred and thirty-two vines as it would be for one hundred and eight.

This method of planting puts the Scuppernong vineyard on an equal basis with peaches for quick returns, and makes it considerably more attractive to the average man than it would be if it were necessary to wait till the permanent vines covered the arbors before getting maximum returns.

The following diagram shows the method of planting when fillers are used.

P	x	P	x	P	x	P	x	P	x	P
x	o	x	o	x	o	x	o	x	o	x
P	x	P	x	P	x	P	x	P	x	P
x	o	x	o	x	o	x	o	x	o	x
P	x	P	x	P	x	P	x	P	x	P

The permanent vines are represented by "P" and are spaced twenty feet apart each way. "x" and "o" represent fillers. The

vines at "o" can be left growing two or three years longer than the vines at "x."

ARBORING

For the first year after the vines are planted, a strong stake stuck in the ground alongside the vine is sufficient support. The vine should be watched all summer, and carefully tied to the stake as fast as it grows, and all buds and shoots along this cane, for the first six feet, should be rubbed off as soon as they show. This cane is to form the trunk of the vine, and if it is carefully held to its support for the first two or three years, it will always stand straight, and will facilitate later cultivation among the vines.

The second season, an eight-foot post should be set in the ground two feet deep, at each of the posts marked "P" and "o." The better the quality of these posts, the longer they will last. Fat lightwood is the best that can be secured, and ought to stand a generation without renewal. At the ends of the rows in each direction, it will be necessary to set an extra heavy post, to be braced securely.

As soon as the posts are set, and the end posts braced, a number nine galvanized wire is stretched tight lengthwise across the tops of each of the rows of posts, securing it to the top of each post with a large staple. The following season, number fourteen wires are run at right angles to the number nine wire across the field, resting on and fastened to, each of the number nine wires. There should be two of these wires for each row of posts, one on either side of the post and about a foot from it. As the vines grow and spread, more number fourteen wires will be needed each season, running parallel across the field and about two feet apart, until the whole space is covered. This forms a strong, light arbor that will last a great many years.

As a precaution against lightning, a wire should be run into the ground from each of the cross wires deep enough to strike permanent moisture.

The following cut illustrates a top view, showing how the arbor will look when completed:

In the above diagram, the large dots represent the tops of the posts which are set at every other vine, or twenty feet apart in the rows. The heavier cross lines represent number nine wires, running across the field and fastened to the top of each post. The lighter, up and down, lines represent number fourteen wires, which are stretched over the tops of and fastened to each of the cross wires.

CULTIVATION

The root system of the Scuppernong is very shallow, the roots usually running from three to eight or ten inches under the surface. For this reason it is not wise to plow between the rows or under the vines after the second or third year. However, the ground under the vines should be kept clean and cultivated with disc or Acme harrow. After the vines completely cover and shade the ground, there is not a great deal of danger of the land becoming foul with weeds or grass, but the moisture content of the soil is of great importance, and to keep the land well mulched by cultivation will very materially increase the crop. It is of extreme importance that a

vineyard have clean cultivation the first few years, and during the first season the space for three feet around each vine should be kept free from all grass or weeds.

COMPANION CROPS

For the first two or three years after the vines are planted, or until they begin to bear fruit, it is possible and practical to plant hoed crops between the rows of vines and retain the use of the land. The crops best suited for this purpose are the legumes, soy beans or peanuts, during the summer, and vetch and crimson clover may be sown for winter cover. These crops should be fertilized with sufficient potash and phosphate to insure a good growth, and can be cut for hay. Corn or small grains should not be planted between the rows, and cotton and tobacco should not be used after the second year, but melons or truck crops of any kind are all right. Where a stand of winter vetch can be secured, we believe this will add materially to the value of the vineyard, and increase the profits for many years. If a good stand can be secured, and it is allowed to mature in the spring and lie on the ground during the summer, it should form a mulch for the vines, and will reseed itself when disced in in the fall.

A Scuppernong vineyard is an excellent place to raise poultry. The vines form a protection both in summer and winter against sun and wind, and, as the vines require very little care, a large poultry business can be profitably carried on, even in a small vineyard. Sheep are also a very profitable "side line" where companion and cover crops are grown.

FERTILIZERS

So far as we know, there have never been any experiments made to test the fertilizer requirements of the Scuppernong. We have learned, however, that even though the vines will make growth on the poorest of soils, they will also yield very large returns on what would be considered a lavish application of fertilizer.

The fact that the roots are all near the surface of the ground makes them respond quickly to fertilization, and it is possible, on the light

lands, to control, in a great measure, the growth of the vine as well as the fruit, by fertilization. It has been the opinion of many that the Scuppernong needs no fertilization. In a sense this is true, for the vine will yield a profitable crop without the application of commercial fertilizers, but we are considering the question from the standpoint of how much fertilizer can be profitably applied, rather than on how little will the vine get along. The size of the crop from a Scuppernong vine is dependent on the size of the vine rather than its age. This being the case, it is very profitable to feed the vines all they will consume of fertilizers tending to make growth, in the earlier stages of the vineyard. This means an abundance of nitrogen and potash, with sufficient phosphate to ripen the wood. The character of soil will greatly influence the quantities to be applied, but a safe rule is to apply, and work well into the soil in the spring, four hundred pounds of acid phosphate and seventy-five to a hundred pounds of muriate of potash per acre, adding light applications of nitrate of soda if the vines show need of it. As the vines grow older, the amount of phosphate and potash should be gradually increased to take care of the increased demands of the vines.

SELF-STERILITY OF BLOOM

From many experiments made by the Government and State Departments of Agriculture, it has been definitely proven that the bloom of the Scuppernong is self-sterile, and needs the pollen from a male vine in order to set fruit. In the sections where these grapes thrive there are always many wild vines in the woods, and in most seasons these are sufficient to insure a fair crop of grapes, but, to insure a yield every year, it is wise to have male vines planted in with the Scuppernongs, at least one or two to the acre, and a few hives of bees will prove a profitable "side line," both by insuring more nearly perfect fertilization of the bloom, and for the honey they will make.

GATHERING

The bunches of the Scuppernong, as a rule, are small, averaging three to ten berries to the bunch. These shatter easily from the bunch when ripe, and the best and cheapest method of gathering the crop is to spread a canvas or sheet under the vine and shake the

grapes into it. These are then dumped into a barrel, and are ready for shipment. The cost of gathering by this method is from seven to ten cents per bushel.

YIELDS

The yields to be expected from a Scuppernong vineyard are, as with other fruits, dependent in a great measure on the care given the vines. After the vineyard is once established and the arbors constructed, the vines will probably yield a paying crop every year for ten or fifteen years even though absolutely neglected. With proper care, however, keeping the dead wood pulled out and sufficient fertility added each year to make up for that used by the season's growth, they will yield very large returns. For fear those who are not familiar with the grape and its yield may doubt our veracity, we are not giving estimated yields per acre, but are quoting from disinterested authorities.

In *Gardening in the South*, Wm. N. White, speaking of the Scuppernong, says: "It rarely, if ever, fails to produce a heavy crop. We have never known it to fail. * * * It will produce a greater weight of fruit than any other variety in the world. Vines, six years transplanted, have this year given us an average of three bushels to the vine, and we shall be disappointed if they do not double every year for many years in the future. We are credibly informed that a vine of this variety is growing near Mobile which has produced two hundred and fifty bushels of grapes in a year, and we know that vines ten years old have given, and will give, thirty bushels per vine."

The following is an extract from a letter by Geo. C. Husmann, Pomologist, in charge of Grape Investigations for the United States Department of Agriculture.

"No authentic figures regarding its yield are available, although large returns are often obtained. It is claimed that young vines, properly grown and cared for, can be expected to yield three bushels to the vine, when five years old, after which the yield should gradually increase as the vines grow older and stronger, provided proper care is taken of them."

MARKET

The Scuppernong grape is essentially a wine grape. It is of very fine quality when eaten fresh from the vine but does not keep well and cannot be shipped to distant markets. It makes a very light wine of superior quality which has rapidly attained great favor.

To meet the increasing demand for this wine the manufacturers are willing to contract for the grapes twenty-five years in advance at prices that will yield an immense profit to the grower, thus affording an absolutely sure market.

PLANTING

A Scuppernong vine is rather difficult to transplant, unless handled properly from the time it is dug until it is planted. If the small roots or feeders dry out they are of no further value to the plant. For this reason it is of great importance that the vines are handled carefully and properly from the time they are dug until they are in the ground again.

The best time to plant Scuppernongs is in the fall of the year, but they can be safely planted any time from the middle of November to the first of March.

Considerable trouble has been experienced many times in getting a good stand of vines. The trouble has been due to several causes such as dried roots, planting too deep or too shallow or the vines may be weak to start with unless properly grown. It is possible, however, to get as good a stand of Scuppernongs as any other fruit. The system we use has proven very successful and the details will readily be furnished upon request to The Southern Pines Grape Nurseries.

SUMMARY

We do not believe there is another fruit combining the advantages that are offered the growers of Scuppernong Grapes. We know of no other fruit that combines the safety of market with low cost of production and large crops, that are the features of the Scuppernong.

The following facts can be proven at almost every homestead in Eastern North Carolina:

1. There are no insect enemies of the fruit or vine and no disease affecting them.
2. The vines require no careful and expensive pruning.
3. There is no danger of a late frost killing the buds.
4. There is no age limit to the vines.
5. Grapes are grown best on the cheapest land.
6. There is no need of expensive packages or equipment.
7. The vines are heavy and sure bearers.
8. The product has a high value and brings highest prices.
9. A sure market for a long term of years takes the industry entirely out of the gamble class.

There are many of the commercial fruits that do not enjoy a single one of the above advantages, and very few fruits can claim more than two, and we believe it is a knowledge of this that has awakened people all over the country to the possibilities of Scuppernong growing.

R. C. COOL, *Manager,*
Southern Pines Grape Nurseries.

SOUTHERN PINES, N. C.

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