

WHITESBOG BLUEBERRY NOTES

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Whitesbog, N. J.

We receive many questions about the requirements for growing blueberries and the results that can be secured from them as a commercial crop. Because of their general interest to farmers and fruit growers who live where blueberries can be grown, some of the most common questions are given here with answers based on our experience at Whitesbog. This information is for the commercial grower who can plant blueberries where conditions are naturally suited to them. Information about creating the right conditions in the garden in order to grow blueberries for home use will be furnished upon request.

Are cultivated blueberries a money crop for the practical grower?

Yes, cultivated blueberries have passed the experimental stage. While their requirements are different from those of most other fruits, they are easy to grow and can be planted with confidence where the right conditions are found. They cannot be equalled as a money making fruit crop, either for the grower who plants several acres and specializes, or for the general farmer who wants from $\frac{1}{4}$ acre to 4 or 5 acres to supplement other sources of income. Our confidence in the commercial value of blueberries is clearly indicated by the fact that we have over 60 acres planted at Whitesbog and are preparing additional land to be planted. A number of other growers who have been watching the development at Whitesbog for several years have from 1 to 9 acres planted and are enlarging their plantings.

What are these special requirements for growing blueberries?

The right conditions for blueberries are available in many places, as can readily be understood from the widespread occurrence of wild blueberries. The essential requirements for blueberries under cultivation are:

1. An acid soil, preferably one composed of peat and sand. They will not do well in heavy clay, even if it is acid.
2. A continuous supply of soil moisture during the growing season. They will not produce a full crop if subjected to a severe drought. It is therefore necessary to select a soil that holds moisture well, or which is supplied underground from springs or seepage from nearby ponds or streams.
3. Good drainage and an aerated soil. From the middle of April until late in the fall, we have found it advisable to provide drainage that holds the water-level in our soil at least 18 inches below the ground surface. The wet spots in our fields are drained with tile laid 18 to 24 inches deep. Where this amount of drainage cannot be secured in any other manner, satisfactory results have been obtained by throwing up slight ridges with a plow and planting the bushes on these ridges. Where such ridging is done, it is necessary to provide sufficient drainage so that the land can be kept well cultivated.

The soil where wild highbush blueberries flourish is acid enough for growing blueberries under cultivation but sometimes needs additional drainage, moisture, or peaty material, to secure vigorous growth and profitable crops. At Whitesbog we frequently find it necessary to install tile drains in some of our lowest ground though wild blueberries flourished there before the land was cleared, while our higher ground is benefited by working in additional peaty material. In heavier soils such as those in which highbush blueberries grow in many places in New England, Pennsylvania, and other states, it is very beneficial to work in rotten sawdust or similar peaty material when planting cultivated blueberries. This lightens the soil and provides the best kind of plant food for blueberries.

Land where blueberries do not grow wild may prove suitable for them if it meets the above requirements. The only positive way to determine this is to experiment with a few plants.

What is acid peat?

Acid peat is composed of partially rotted vegetable matter. Peat is commonly found in bogs or in wet swampy ground where the decay of the vegetation has been retarded by poor drainage. It is therefore composed of the fallen leaves and remains of dead plants that have been collecting for many years. Peat is sometimes incorrectly called "muck," but true muck is much more decomposed than peat, and is not acid. Peat underlaid with marl will not remain acid under cultivation and therefore is not suitable for blueberries.

How can I tell whether my soil is acid?

If wild blueberries are growing on your land it is acid. If there are no wild blueberries and you will send us a sample the size of an egg, we will test it without charge. From such a sample we can tell you whether the soil is acid and advise you whether it is worth while to experiment with cultivated blueberries. Of course, it is impossible to tell positively from a soil sample whether blueberries will grow vigorously enough to be commercially profitable. This can only be determined by making a trial with a few plants.

Are blueberry plants difficult to transplant?

No, they are safely transplanted by using ordinary care to keep the roots from drying out. To secure satisfactory results it is necessary to transplant them with some soil on their roots, so the plants are always shipped with a root ball. With careful planting in good blueberry soil there should be little, or no, loss of plants.

What cultivation do blueberries require?

They should be kept thoroughly cultivated and free from weeds from the time growth starts in the spring until the latter part of the summer. We usually give the last cultivation in August. Thorough cultivation is very important and makes a great difference in the growth and productiveness of the plants. For the first 2 or 3 years after the plants are set out, we cultivate across the rows in addition to between them. After the plants become too large for a cultivator to pass between them safely, we keep the weeds from between the plants with hand hoes. A spring-tooth harrow has given good results for cultivation between the rows.

Do blueberries need fertilizer?

Commercial fertilizer broadcast at the time of the first or second cultivation has given excellent results. We use 400 pounds to the acre of a mixture which we prepare ourselves from the following materials: 100 pounds nitrate of soda, 260 pounds finely ground rock phosphate, 40 pounds sulphate of potash. If finely ground rock phosphate cannot be obtained, an equal amount of acid phosphate may be substituted for it. Fertilizer is broadcast between the rows just before the first or second cultivation and harrowed into the soil at once.

Should blueberries be pruned?

A very light pruning is needed for the first 2 or 3 years and a more severe pruning when the plants begin to produce heavily. This pruning should be done during the winter when the plants are dormant. Pruning mature plants consists of removing old stems that have become unproductive by cutting them off close to the ground and thinning out the center of the bush to let in the air and removing small, twiggy growth that seems too weak to produce first quality berries.

Do the bushes need to be sprayed?

No, this is one of the great advantages of blueberries. We have had so little difficulty with insects or diseases that spraying is not necessary.

How much fruit can be secured from the Whitesbog Blueberries?

Most of the fruit that we have marketed so far has been from our fields of trial plants. The bushes of named varieties have been cut up for propagating material in order to build up a supply of plants as rapidly as possible, and as a result our first fields of the named varieties are just beginning to bear. From a planting of 2½ acres of plants under trial, we have secured one hundred fifty 32-quart crates the third summer after they were planted, but this is exceptional. This is the age at which the plants produce their first commercial crop. From mature bushes of the varieties Rubel and Adams in the summer of 1924, and again in 1925, we picked over 4 quarts per bush. However, it would be too much to expect such production from a large area year after year. We believe that our named varieties when planted in good blueberry soil at Whitesbog will average 75 to 100 32-quart crates per acre a year.

How do cultivated blueberries withstand shipment?

We ship our berries by truck or train to New York, a distance of about 100 miles, and find that they arrive in perfect condition. We have held berries two and even three days after they were picked before shipping them and had them reach market in perfect order. Small shipments to more distant points have indicated that they can be sent several hundred miles by express. In carload lots under refrigeration, we believe there would be no difficulty in shipping half way across the continent.

What price do you receive for the fruit?

In the last three years the price of berries of our named varieties has ranged from 40 to 65 cents a quart, wholesale, and averaged 51 cents a quart. To determine the return at our farm, deduct 10% selling commission and 2 cents a quart for ex-

press on the berries to market. Our first crop of berries was picked in 1916. All of the berries since then, including many small ones from bushes under trial, have averaged over \$10 a 32-quart crate, net at the farm.

The difference in price between cultivated blueberries and wild blueberries is clearly shown by the following extract from the New York Producers' Price Current for July 23, 1924, where both blueberries and huckleberries are quoted under the heading "Huckleberries":

HUCKLEBERRIES

N. C., per quart10 @ .18
Jersey, cultivated, per quart50
Jersey, per quart15 @ .25
Penna., per quart20 @ .30
Del. & Md., per quart	12 @ .22

Are there commercial plantings anywhere except at Whitesbog?

Yes, a number of plantings have been made in New Jersey. A few of these have begun to bear and the owners in each case are planning to put out more plants as soon as possible. One grower, who sells his produce at a nearby city market, says that he secures as much for a pint of his cultivated blueberries as his neighbors secure for a quart of wild ones. He was especially interested to see that the same customers kept coming back for more of his berries. In Massachusetts last summer, a planting of 3/11 of an acre produced 1,467 quarts which sold for \$475.28. A large part of these were sold to retail buyers who came to the field to secure them. Plantings in other states are making good growth and promise to yield profitable crops as soon as they come into bearing.

Can you pack the plants so they will reach me in good condition?

We will let two of our customers answer this for us:

"The plants arrived in first class condition to-day and are safely planted. I have never before received plants which appear to have had such careful packing and never so well rooted, and I appreciate it."—*Massachusetts*.

"The blueberry plants arrived a week ago to-day in A-1 condition. You surely know how to pack plants for shipment."—*Pennsylvania*.

We have successfully shipped plants to the Pacific Coast by freight, and every year make shipments to Europe with good results.

Have you a question?

Possibly you have a question that is not answered here. If so, and you will write us, we will gladly answer it by letter.

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