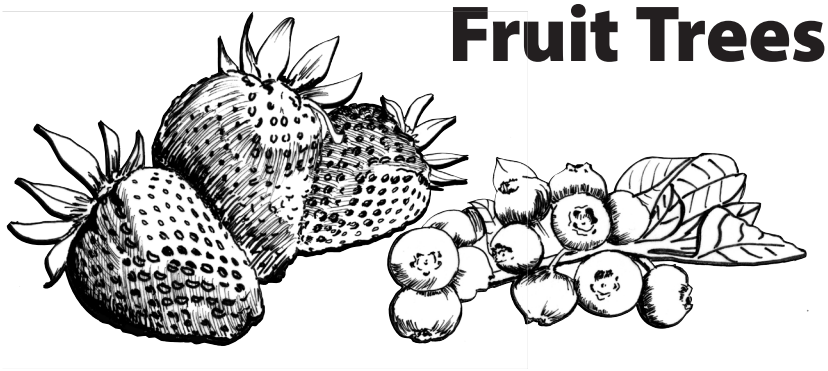
Fruit Trees and Bushes



TREE FRUIT IN THE HOME GARDEN

Tree Fruit in the Home Garden is the title of an excellent publication that is available on line (https://Resources.ext.vt.edu.) It is officially numbered as Publication 426-841. It covers many aspects of fruit tree growing for the home gardener. Check this out before you start planting fruit trees. For your benefit, highlights of the referenced publication are included below. At the same time, visit https://Resources.ext.vt.edu or https://vtechworks.lib.vt.edu/handle/10919/5548 for a host of references ranging from proper pruning techniques to advice on specific fruit trees, such as Publication 3010-1483, Flowering Crabapples of the *Malus* species.

It is desirable to locate your fruit trees as close to your home as possible. If space is limited, fruit trees may be set in almost any location suitable for ornamental plants as long as the tree will have eight hours of sunlight each day and is located at least 35 feet from the septic system and away from tidal areas. Always consider first the mature size of the tree when planning its location. About six months before planting, have your soil tested. Soil test materials can be obtained from your Gloucester County Virginia Cooperative Extension Office.

Dwarf fruit trees lend themselves admirably to ornamental plantings as well as orchards. They come into bearing earlier than standard-sized trees, occupy less space, and can be more easily pruned and sprayed with equipment normally available to the average gardener. Most nurseries now carry dwarf and semi-dwarf apple trees of all varieties. However, only a few varieties of dwarf pear, peach, and cherry trees are offered by local nurseries as, generally, these trees may not survive more than five years due to disease and incompatibility problems.

Obtain the best nursery stock available. Beware of "basement bargains." Well-grown nursery stock is not cheap but paying the extra price now will result in a better bargain long-term. One-year-old trees are usually preferred. Younger trees allow you the opportunity to properly train and observe their growth; you cannot do this for the older "ready-to-bear" trees. **Bearing age is usually 4 to 7 years from time of planting.** When buying fruit trees, look for disease-resistant varieties and, again, pay a little extra for the more disease-resistant varieties. There have been many improvements over some of the older stock.

Planting Trees

Fruit trees can be planted in Virginia in fall or early spring. You can be assured of good results by selecting either one of these planting periods. Planting a month after the first killing frost—on or about December 11 in the fall—or a month before the last killing frost—on or about April 10 in the spring—is generally recommended. It is important to remember that trees should be dormant and that the soil should have proper moisture content to foster good growing conditions.

If the places selected for trees are in a lawn, it is best to remove the turf and spade the soil deeply over an area of several square feet where each tree is to stand. Preparation of the soil where fruit trees are to be planted should be as thorough as preparation of the soil for a vegetable garden or ornamental planting. Good drainage is important. A rule of thumb is to plant your tree in a relatively high area.

Dig the hole only as deep as and two times wider than the root system. You may retain the root ball

but bare root planting is the preferred technique. Prune the roots of young trees only where necessary to remove broken and damaged ones or to head back some that are excessively long. Set the tree at approximately the same depth it grew in the nursery.

Now let's take a moment to explore some important definitions.

"A **rootstock** is a plant, and sometimes just the stump, which already has an established, healthy root system, used for grafting a cutting or budding from another plant. The tree part being grafted onto the rootstock is usually called the **scion**. The scion is the plant which has the properties desired by the propagator, and the rootstock is the working part which interacts with the soil to nourish the new plant. After a few years, the tissues of the two parts will have grown together, producing a single tree although genetically it always remains two different plants."

–Wikipedia, the free encyclopedia,
whttp://en.wikipedia.org/wiki/Rootstock

Never set it so deep that the union of the scion and rootstock is below ground level when the hole is filled.

Alternately, add pulverized topsoil and water to the hole; gently lift the tree up and down to settle the soil around the roots. When the hole is filled, tamp the soil firmly and thoroughly with your foot or hands. Do NOT compact the soil with the flat end of your shovel. Leave the soil loose on top. This ensures the vital flow of oxygen into the root system.

Mulch and Rodent Control

Young trees should be mulched or cultivated until they begin to bear fruit. Weeds must be eliminated so they will not compete for available moisture and fertilizer. Cultivation must be shallow to avoid injury to roots near the surface. The cultivated or mulched area should extend a little beyond the spread of the branches.

There are several concerns with the use of mulch around fruit trees. First, both organic (i.e., wood chips) and inorganic mulch (i.e., black plastic) provide habitats for rodents such as mice and voles. Mice chew off the bark at ground level or below and often completely girdle a tree, causing it to die. Voles eat the roots of the trees. Most of this damage occurs in the winter. Keep mulch pulled away from the base of the tree at a distance of three to four inches so these rodents cannot hide in it.

A second concern is that organic forms of mulch release nitrogen throughout the season. This affects the grower's ability to control when and how much nitrogen is available. The remedy suggested is to remove the mulch in the fall after the growing season has ended.

Rabbits account for the loss of thousands of young fruit trees each year. The most satisfactory method of preventing rabbit damage is the use of a mechanical guard. Refer to *Tree Fruit in the Home Garden* for more detailed explanations.

Fertilizer

As a rule, no fertilizer is needed at the time of planting. A little background: the three numbers (commonly referred to as "N-P-K") that appear on the label of every packaged fertilizer represent the three main plant nutrients: Nitrogen, Phosphorus and Potassium (which is sometimes called 'Potash'). Dan Nortman, former York County Extension agent, reminds us that the ratio between Carbon and Nitrogen is important in bud set and flower/fruit production. You want to maintain moderate levels of each for optimum production. It is important to have your soil tested and follow the recommendations given by Virginia Tech for your particular soil. Rollin Woolley, horticulturist and owner of Orchard Lane Growers in Gloucester, has raised fruit trees for years. He recommends fertilizing in the fall with a 5-10-10 fertilizer, compost, or organic fertilizer. The publication, *Tree Fruit in the Home Garden*, also has recommendations for fertilizing the fruit trees.

Tree Fruit Spraying

For significant insect or disease problems, it may be necessary to follow a spray program. Information on the use of chemicals for such a program is available at the Gloucester County Virginia Cooperative Extension Office. To be successful with your spray program, spray at the proper time and do it thoroughly. Leave no portion of the tree unsprayed. To make the job easier and to ensure adequate cover-

age, thin out excessive growth and remove all dead and weak wood. Cut old trees back to 20 feet or less, if possible. Train younger trees so they reach a height of no more than 18 feet.

Semi-dwarf and dwarf trees should be considered when making your planting. Their small size makes the task of spraying easier. Early maturing varieties are less likely to be seriously affected by insects and diseases than late-maturing varieties because of the shorter growing season. This factor should not be overlooked in the selection of varieties.

Sanitation

Adopt good orchard sanitation practices. The destruction of places that harbor insects and diseases plays a large part in the control program. Conditions that encourage mice should also be eliminated. These are some practices to include in an orchard sanitation program:

- Collect and burn debris.
- Keep weeds and grass from under the tree canopy.
- Remove and destroy all dropped fruit.
- Rake and burn apple and cherry leaves.
- Scrape loose bark from trunks, crotches, and main limbs of apple trees.
- Prune out and destroy all dead or diseased limbs, branches, and twigs.
- Prune annually.
- Plan to use pesticides to control diseases and insects.

Variety Selection

Give special attention to the selection of varieties. They must be adapted to your soil and climatic conditions. If possible, without sacrificing too much yield or quality, select varieties with the fewest insect and disease problems. Several varieties of the same kind of fruit maturing at different times may be planted to prolong the harvest season. The value of certain varieties for special uses, such as freezing, canning, and preserving, should be considered. Some varieties may be purchased in season from commercial growers more economically than you can grow them yourself.

Cross-pollination is necessary for satisfactory fruit set (evolution of fertilized flowers into tiny fruits) in many tree fruits. Varieties that are cross-fruitful and that have overlapping bloom dates should be selected.

"Plant a crabapple tree in your orchard to ensure pollination success"

—Dan Nortman, Williamsburg Extension Agent

"This really works! I planted a Crabapple tree among my dwarf apple trees and saw 100% pollination of all varieties!"

—Henry "Hurricane" Thompson, GEMG

RECOMMENDATIONS FOR TREE FRUITS

Apples

The following list of apple varieties is compiled from Virginia Tech's recommendations in publication, *Tree Fruit in the Home Garden*, 426-841, and from interviews with Rollin Woolley in Gloucester. Over the years, Mr. Woolley has tried different varieties, including many of the older or heritage kinds, and these are the ones with which he has had the most success. He has done no spraying in his orchard since the visit by Hurricane "Isabel" in 2003. This is an ongoing experimental orchard in Gloucester.

With apple trees, a minimum of three trees is necessary for cross-pollination. To be certain of adequate cross-pollination, plant at least three varieties of apples. Don't confine your selections to Summer Rambo, Winesap, and Stayman. These varieties will not cross-pollinate. According to Virginia Tech, Golden Delicious apple trees are used by many commercial growers as pollinizers for other varieties of apples in their orchards. Having a summer, fall, and winter variety in the garden extends the season.

"Plant a crabapple tree in your orchard to ensure pollination success", says Dan Nortman, Williamsburg Extension Agent.

"This really works! I planted a Crabapple tree among my dwarf apple trees and saw 100% pollination of all varieties!"

—Henry "Hurricane" Thompson, GEMG

"If deer are a problem on your property, do not plant dwarf trees—plant standard-sized only; otherwise, the deer will keep the leaves stripped from the entire tree."

– Rollin Woolley, Horticulturist and Gloucester Apple Grower

The following tables list varieties in order of ripening as well as provide descriptions of the varieties and

Recommended by Virginia Cooperative Extension

Variety	Description
Ginger Gold	One of earliest yellow apples to ripen; good for eating out of hand. Flavor is mild with a tart finish. Does need spraying
Summer Rambo	An early-ripening tender, juicy, green apple with a fine tart flavor. Good for frying, pies, and applesauce
Rome Beauty (red strain)	A dark red apple that is large to very large, roundish to somewhat oblate in shape. The thick, smooth skin is yellowish-green almost entirely covered with bright red and dark carmine stripes. The yellow flesh is firm, crisp and juicy with a tangy pleasing flavor. One of the best cooking and processing apples. Ripens in September to October and keeps well. Does need spraying
Golden Delicious	Fruit is large, conic to round in shape with mostly smooth golden yellow skin with occasional russet patches. The crisp, clean juicy yellow flesh is sweet and mild—good for eating out of hand. A self-fertile tree that is an excellent choice for a pollinator tree. Ripens mid to late September

Varieties Grown by Rollin Woolley In Gloucester

Variety	Description
Lowland Raspberry	The flesh is fine-grained, juicy and very tender. Fruit is medium to large and somewhat flattened on both ends. Ripens in July/August. A dessert apple
Summer Rambo	An early-ripening tender, juicy, green apple with a fine tart flavor. Good for frying, pies, and applesauce
Yellow Transparent	Fruit is medium sized with smooth transparent yellow skin. White-fleshed, tender, fine-grained and juicy. Flavor is quite tart and tangy. Ripens June to July, depending on location
William's Pride	An early-maturing, attractive, dark red apple with excellent fruit quality and field immunity to apple scab. The fruit is of medium to large size and matures with the very earliest known commercial red cultivars in the midwestem United States. A summer dessert apple
Mollies Delicious	One of the best yellow delicious apples on the market. They are good for fresh eating, pies, and sauces. This apple matures in mid-season and is a very productive, vigorous tree. The fruit texture is crisp and firm.
Gravenstein	An oblong or lopsided fruit having bright yellow skin with a pinkish-orange flush and light red striping. The creamy yellow flesh is tender, crisp, juicy, and aromatic. Ripens July to August in most areas and is not a good keeper
Zabergau Reinette	German russet-style apple, but sharper than Egremont Russet, tastes of nettles when straight from the tree. Great for pies. CAUTION: prone to fire blight
Golden Delicious	A large, yellow skinned cultivar and very sweet to the taste. It is prone to bruising and shriveling, so it needs careful handling and storage. It is sweeter than the Granny Smith and is a favorite for salads, apple sauce, and apple butter.

Varieties Grown by Rollin Woolley In Gloucester (*continued*)

Ashmead's Kernel	Its appearance is lumpy, misshapen, and rather small but it has a distinctive flavor that is quite different from most other varieties. This dessert apple is outstandingly rich and tart. The apple sweetens as it stores and stores successfully for up to 12 months. The fruit is generally picked in October for use between December and February. It makes a good apple juice or applesauce.
Russet	Russet apples are not a single type of apple but rather a group of apples in which there are many cultivars. Russet apples often exhibit exceptional scent and flavour, typically reminiscent of nuts, and are often very sweet. Dessert apples
Albemarle Pippin	The most famous of the Virginia apples. The crisp, juicy, firm flesh and very distinctive taste, along with its excellent keeping qualities, made the Pippin the most prized of American dessert apples.
Arkansas Black	A beautiful dark red to almost black apple considered to be one of the best storage apples. The fruit ripens late November and is rock-hard when harvested, but softens and improves in flavor in storage. Fruit is medium-sized and slightly conical in shape. Yellow flesh is firm, fine-grained, crisp, moderately juicy, and slightly subacid in flavor. A cooking apple
Pomme Gris	The fruit is medium to small in size, with a thick, tough, greenish-yellow skin, usually completely covered with a russet. The yellow flesh is crisp, juicy, aromatic and richly flavored. The tree grows upright and bears full crops annually. This excellent cider apple stores well and ripens in September. Thomas Jefferson grew Pomme Gris at Monticello as a dessert apple, and it is a notable one for the connoisseur, with a rich sweet nutty flavor.
Johnson's Fine Winter Keeper—also called York Imperial	One of the most important commercial processing apples in Virginia, It has long-keeping abilities and fine processing qualities. The fruit is medium to large with a distinctive oblong or lopsided shape. The skin is light yellow in color with stripes of brownish-red. The coarse yellow flesh is firm and juicy with a mild tartness to the flavor. Ripens late fall (November - December) and hangs well on the tree into late winter. It is a dessert apple.
Red Royal Limbertwig	One of the best for eating fresh, for apple butter, and cider--an all-purpose apple. Apple is large, round, and some will be a bit conical. Red and greenish yellow with stripe and white dots. Very aromatic, firm, and crisp, very rich unusual pleasing taste
Yates	Fine flavor and long keeping qualities. Grows well in all regions from the mountains to the coast. Fruit is small to very small with yellowish-white skin covered with red stripes and dark red shading. The yellowish-white flesh is tender, juicy and aromatic. Ripens in October and keeps very well until April

Quick Notes:

1. You must first decide if you intend to spray your fruit or grow them organically. If the latter is true, you must look for disease resistant varieties. Many of the problems such as Cedar Apple Rust and Apple Scab have been bred out of the newer apples. See *Growing Apples in Virginia*, officially numbered as Publication 422-023 at http://pubs.ext.vt.edu/422-023.
2. Shop from various nurseries. Most will happily provide you a catalog. Visit university websites [they contain an ".edu" extension] for nursery recommendations. And ask other growers in your area which nurseries they prefer.
3. You might have a need to transplant your fruit trees, especially dwarf varieties, in order to provide them ample growing space. Before transplanting, use a hand compass to find "North" and make a small mark on your tree. When you site the tree in its new location, make certain that small mark is once again facing 'North'.

"Mollies Delicious is an excellent variety. It produces a real good apple, does not need spraying and can pollinate all other early blooming varieties! "

– Rollin Woolley, Horticulturist and Gloucester Apple Grower

Cherries (Sweet)
Varieties recommended by Virginia Tech for our area are Napoleon (Royal Anne), Vernon, Ulster, Hedelfingen, Windsor, and Hudson. At least two of the recommended sweet cherry varieties should be planted. Windsor is a good pollinating sweet cherry variety. Sour cherries cannot be used to pollinate sweet cherries because they are different species.

Cherries (Sour)
Montmorency is Virginia Tech's recommendation. It is sufficiently self-fruitful to set satisfactory crops with its own pollen.

Paw Paws
With leaves and branches that deer avoid, and fruit that is loved by all, the pawpaw (*Asimina triloba*) is a fascinating native tree. It's the only local member of a large, mainly-tropical plant family (*Annonaceae*), and produces the largest edible fruit native to North America.

While there are native varieties, there are also many cultivated varieties that have been improved by plant breeders. Pawpaw fruits ripen between late August and October, depending on the variety. Their flavor is sometimes described as a cross between a banana, pineapple, and mango. Each fruit contains two rows of several brown seeds. The skin and seeds are not edible. The fruit is very nutritious and can be eaten plain or used in desserts. Native Americans have long eaten and used the fruit.

Pawpaws have gained popularity among horticulturalists and researchers, and native plant enthusiasts because of their nutritional value and because the leaves, bark, and twigs produce anti-cancer and insecticidal compounds called acetogenins.
As an extra bonus, Paw Paw trees are the exclusive larval host plants for the zebra swallowtail butterfly (*Erytides marcellus*).

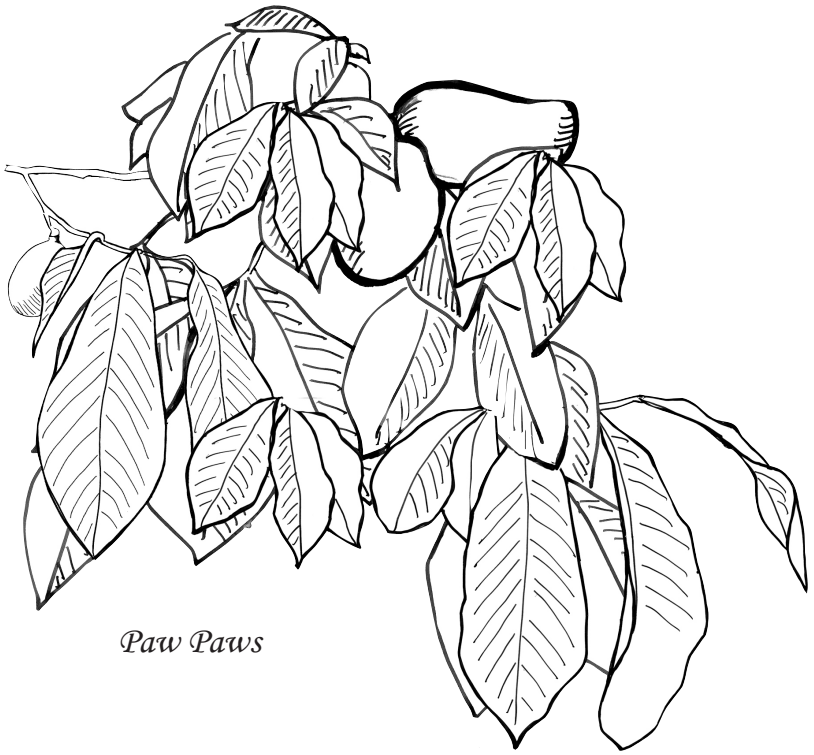
Peaches
Jerseydawn, Redhaven, Loring, Redkist, Earnies Choice, Biscoe, Encore and White Hale are varieties that have done well in the home garden. Like the sour cherry recommended variety, these peach varieties are self-fruitful and do not need pollinizers.

Pears
Harrow Delight, Moonglow, Harvest Queen, Maxine, Seckel, Orient, and Kieffer varieties that have done well in Gloucester. At least two of the recommended pear varieties should be planted.

Plums
Earliblue, Blue Bell, and Stanley have done well in Gloucester. At least two of the recommended plum varieties should be planted. Because Japanese and European plums are not generally effective as pollinizers for each other, two varieties of the same type should be planted.

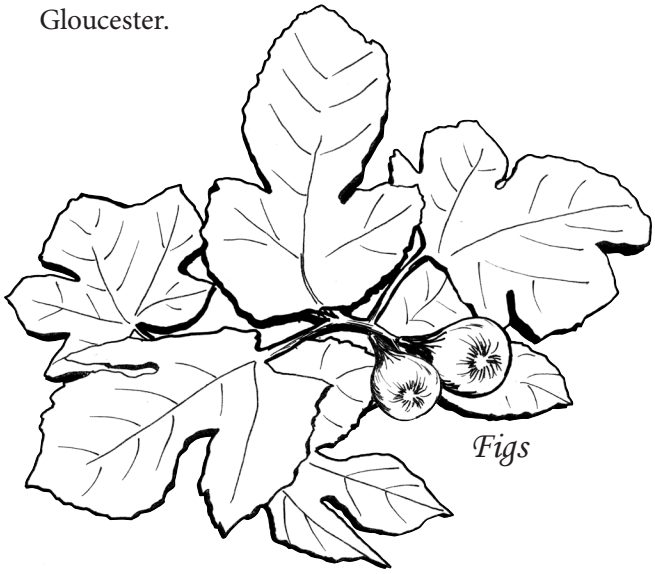
Figs
Many parts of Gloucester are well suited to the growing of figs.

Figs do best in full sun in alkaline soil, but should be protected from the winter winds. The south side of a building is a protected place; just plant the tree at least six feet from the building to allow it room to grow. They like almost any garden soil as long as it drains well. They seem to thrive in the sandy soil such as is found in Bena. Fertilization is not necessary; however a light feeding of dry 10-10-10 fertilizer once a month during the growing season will



Paw Paws

increase the harvest. Mulching with pine straw to a depth of 3 to 4 inches around the base of the trees will help keep down weeds. Figs have few diseases and the biggest pests are the birds. Harvesting early in the morning is the best way to ensure a good crop. One tree should provide enough fruit for one family. There are several varieties of figs that grow well in Gloucester.



Figs

FIG VARIETIES THAT MASTER GARDENERS GROW IN GLOUCESTER COUNTY

"Black "Mission" – looks like a very small eggplant and is great for preserves or to eat fresh

"Celeste" – the best known fig and makes wonderful preserves. It has a small light brownish fruit. *

"Brown Turkey"– a delicious fig to eat right from the tree. It is larger than the "Celeste" and brownish in color. *

"Blanche" (Lemon or Honey) – a greenish fig that is fairly large, very sweet, and needs to be eaten as soon as it is picked. It is as sweet as honey and you have to be quick to get a ripe one before the birds get to it. It cannot be used for preserves because it ripens so quickly, but it is a favorite to eat fresh from the tree.

* Recommended by Virginia Cooperative Extension

Space Requirements, Yields, Bearing Ages, and Life Expectancies of Tree Fruits

FRUIT	Minimum Distance Between Plants (feet)	Approximate Yield Per Plant (bushels)	Bearing Age (years)	Life Expectancy (years)
Apple-standard	30	8	6-10	35-45
Apple—semi-dwarf	18	4	4-6	30-35
Apple—dwarf	8	2	2-3	30-35
Pear—standard	25	3	5-8	35-45
Pear—dwarf	12	½	3-4	15-20
Peach	20	4	3-4	15-20
Plum	20	2	4-5	15-20
Quince	15	1	5-6	30-40
Sour Cherry	18	60 qt.	4-5	15-20
Sweet Cherry	25	75 qt.	5-7	20-30

Taken from Virginia Cooperative Extension publication, Tree Fruit in the Home Garden, 426-840

SMALL FRUIT IN THE HOME GARDEN

Small fruits offer advantages over fruit trees for home culture. They require a minimum of space and bear one or two years after planting. Plant only what you can care for properly. A small well-kept planting is more productive than a large neglected one.

Locate your small fruit in full sun, as close to your home as possible. Where space is limited, small fruits may be used in place of ornamental plants of comparable size. In a very small garden or yard you might want to look for plants that can be grown in containers. Many new varieties are available that would be appropriate.

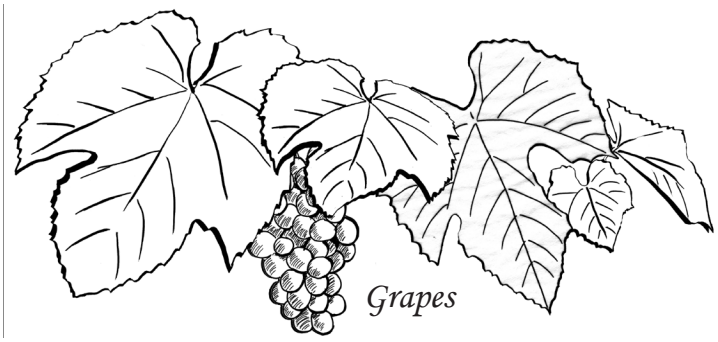
Again, select the best nursery stock available. Place your order early and when it arrives, unpack the bundles and inspect the plants. The roots should be moist and have a bright, fresh appearance. If the plants cannot be set immediately, they should be kept either in cold storage or heeled-in. To cold store, wrap the plants in a garbage bag or plastic sheet and store them in the refrigerator just above freezing. Strawberry plants, in small quantities, may be held in the home refrigerator for a few days. If this is not possible, remove the plants from the bundle and carefully heel them in. Heeling in a plant refers to placing the plants in temporary planting holes or trenches. Dig a trench in a shaded location and put the plants in the trench. Pack the soil firmly around the roots to eliminate all air pockets and to prevent the roots from drying out. Water the trench thoroughly before you put the plants in and after they are in place.

Strawberries

Strawberries are the most popular small fruit in home gardens. They are adaptable to a greater range of soil and climatic conditions than any other fruit and can be grown in every area of Virginia. It should be noted that everbearing strawberries are not recommended for planting in Eastern Virginia because they are less vigorous and generally less productive than the regular varieties.

Grapes

Grapes of some variety can be grown almost anywhere in Virginia as is evidenced by the fact that Virginia is now home to over 250 wineries. Before planting, read the section on grapes in the Virginia Cooperative Extension publication, *Small Fruit in the Home Garden*, publication 426-840, mentioned previously. Besides giving planting instructions and general maintenance, detailed instructions are given on pruning which should be done in the winter when the plant is dormant.



Grapes

"A side benefit of growing your own grapes is to harvest the grapevines at pruning time to make wonderful wreaths." **– Noel Priseler, GEMG Emeritus**

Virginia Tech groups grapes into four categories: American Bunch, Hybrids for wine, Vinifera, and Muscadine. American Bunch are clusters of grapes—such as Concord grapes--that ripen in succession over a long season. Hybrids for wine can be grown anywhere American Bunch grapes can and includes the Vidal
Blanc grape used to produce a white wine. The Vinifera grapes, grown for both table and wine uses, require planting only vines grafted on resistant rootstocks. Muscadine grapes include the Scuppernony, Carlos, and Magnolia varieties.

Brambles

The bramble fruits include raspberries and blackberries and may be successfully grown throughout Virginia. Both yield their full crop the third year after planting. Trailing, rather than erect, blackberries thrive best in Gloucester. Red raspberries are generally better suited to our area than other varieties. Red and black raspberries need to be separated by at least 700 feet as black raspberries are susceptible to viral diseases obtained when grown near red raspberries.

Blueberries

Blueberries have a better flavor when grown where nights are cool during the ripening season. In addition, they have specific soil and moisture requirements but need little protection from insect and disease pests. Two or more varieties of blueberries should be planted to provide adequate cross-pollination and to increase chances for a good crop of fruit.

Currants and Gooseberries

You don't hear of many people growing currants or ooseberries in Gloucester. In the past, their plantng was restricted in many parts of Virginia because hey are alternate hosts to the white pine blister rust isease. The ban has been lifted completely for all urrants and gooseberries.

Currants and gooseberries are hardy and easy to row. They are used mainly in making jellies, jams, reserves, and pies.

RECOMMENDATIONS FOR SMALL FRUITS

Strawberries	Grapes	Brambles	Blueberries	Currants	Gooseberries
Regular: 'Allstar' 'Delite' 'Delmarvel' 'Earliglow' 'Honeoye' 'Lateglow' 'Redchief' 'Sunrise' 'Surecrop' **Ever-bearing:** 'Ozark Beauty' **Day-neutral:** 'Tribute' 'Tristar'	**American bunch:** 'Delaware' (red, seeded) 'Himrod' (white, seedless) 'Mar' (blue, seedless) 'Niagra' (white, seeded) 'Seneca' (white, seeded) 'Steuban' (blue, seeded) **Hybrid—for wine:** 'Chambourcin' (black) 'Chardonel' (white) 'Traminette' (white) 'Vidal blanc' (white) ***Muscadine—** Scuppernong: 'Carlos' 'Magnolia' **Vinefera:** 'Cabernet Franc' (black) 'Chardonnay' (white)	**Blackberries:** **<u>Erect</u>** 'Darrow' 'Cherokee' 'Cheyenne' 'Comanche' 'Navaho' **<u>Semi-erect</u>** 'Black Satin' (thornless) 'Dirksen' (thornless) **Trailing—Dewberry and Boysenberry:** 'Lavaca' 'Lucretia' **Raspberries** **Red:** 'Latham' 'Heritage (everbearing) **Black:** 'Bristol' 'Cumberland' 'New Logan' 'Titan' **Purple:** 'Brandywine' 'Royalty'	**Rabbiteye varieties:** 'Climax' 'Premier' 'Powderblue' 'Tifblue' **Highbush varieties:** 'Earliblue' 'Blueray' 'Bluecrop' 'Jersey' 'Coville' 'Elliott'	'Red Lake' 'Wilder'	'Pixwell' 'Red Jacket'
Taken from Virginia Cooperative Extension publication Small Fruit in the Home Garden, 426-840					
* The classic muscadine grapes are recommended for easy care in our area. The muscadine grapes have thick skin and seeds, but they do not require chemical sprays and only a good seasonal fertilizer to do very well. They are wonderful for jams, jellies, pies, and juices. All grapes require good airflow, an open location, support on a fence or trellis, and good sun exposure.					

Freeze ripe fruit to make jam in the cold winter months when you are overloaded with other canning chores in August and September.

– Joann Gallagher, GEMG Emeritus

In the following table Virginia Tech provides information on space requirements, yields, bearing ages, and life expectancies of small fruits.

Space Requirements, Yields, Bearing Ages, and Life Expectancies					
Minimum Distance Average					
FRUIT	**Between Rows (Feet)**	**Between Plants (Feet)**	**Annual Yield Per Plant (Quarts)**	**Average Bearing Age (Years)**	**Life Expectancy**
Blueberry	6	4	4-6	3	20-30
Blueberry (erect)	8	3	1 1 / 2	1	5-12
Blackberry (trailing)	8	6	1 1 / 2	1	5-12
Raspberry (red)	8	3	1 1 / 2	1	5-12
Raspberry (black)	8	4	1 1 / 2	1	5-12
Raspberry (purple)	8	3	1 1 / 2	1	5-12
Grape (American)	10	8	15 lb.	3	20-30
Grape (French American)	10	8	15 lb.	3	20-30
Grape (muscadine)	10	10	15 lb.	3	20-30
Strawberry (Juneberry and dayneutral)	3	2	1-2	1	3
Currant	8	4	4-6	3	10-20
Gooseberry	8	4	4-6	3	10-20
Taken from Virginia Cooperative Extension publication, Small Fruit in the Home Garden, 426-840					

REFERENCES

Rollin Woolley, Horticulturist and Landscape Supervisor (Retired) for Colonial Williamsburg and owner of Orchard Lane Growers in Gloucester.

Below is a partial list of Virginia Cooperative Extension publications that address shrubs. These and other publications about specific trees and small fruits can be found at https://Resources.ext.vt.edu or https://vtechworks.lib.vt.edu. (Type in the publication number [e.g. 456-018] in the search box.)

Growing Apples in Virginia, 422-032
Small Fruit in the Home Garden, 426-840
Tree Fruit in the Home Garden, 426-841

Cornell University's Nursery Guide for Berry and Small Fruit Crops www.fruit.cornell.edu/berry/nurseries

Penn State's Small Fruit page: http://ssfruit.cas.psu.edu/

North American Fruit Explorers: http://www.nafex.org/

Clemson University's Tree Fruits page: http://www.clemson.edu/extension/hgic/plants/vegetables/tree_fruits_nuts/hgic1360.html

To find out more about individual varieties of fruit trees and small fruits, go online and search the name of the variety. The internet has a wealth of sites that describe and picture the varieties. As always, you should select the university websites [they contain an ".edu" extension] whenever available.

Notes: