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Growing Fruit Trees & Bushes

All trees and shrubs listed here should be planted in amended soil according the guidelines in our *Planting Trees & Shrubs* handout which you can get at the Info Hut out in the Nursery Dept. or on our website at www.homewoodnursery.com on the Garden Tips page. **We also recommend a 2-4" layer of mulch over the root zones of the plants.** Mulch should not rest against the base of the trunk or stems.

FERTILIZING: Fertilize in April using good quality compost or a slow-release, organic fertilizer such as Plant-tone or Holly-tone. Avoid high nitrogen fertilizers that can push a lot of succulent growth that tends to be more susceptible to disease and winter injury as well as result in more leaves and less fruit. Foliar seaweed sprays improve tree health, increase yields, and increase bud frost resistance. Be aware that many fruit trees prefer soil that is more alkaline than ours requiring you to apply lime to raise the pH.

DISEASE CONTROL: Apply lime-sulfur sprays to fruit trees in February to help reduce disease problems during the growing season, and dormant oil sprays to smother insect egg masses. Spray when there is a 2-3 day window with no rain called for and on a day that is not windy. Lime-sulfur is approved for organic gardening, and dormant oils are considered a low-toxicity product especially as they are applied long before fruit is produced. Some organic products you may want to know about include Organocide (for many insects as well as black spot and powdery mildew), and Serenade Disease Control for the prevention and reduction of various fungal and bacterial diseases.

PRUNING - Just a preliminary word about pruning. Most pruning guidelines for fruit trees are given with the expectation that the grower wants to maximize the fruit harvest. However, not only does this add to the maintenance regimen for the plant, but some home gardeners may not truly want maximal harvests unless they are selling or giving away the fruit or planning on canning 30 quarts of cherries. If you are growing fruit trees so you and your immediate family can have seasonal fresh fruit, then you may be able to get away with minimal pruning. Often pruning guidelines help keep the trees shorter than they would normally grow which makes harvesting easier, so that can be another thing to bear in mind. Always remove any part of the plant that is diseased, dead, or broken. Always remove water sprouts which will bear little fruit. Water sprouts are easy to detect because they are straight vertical shoots coming out from the tops of lateral branches. Because of the limited scope of this handout, please consult a reference such as the Southern Living Garden Book or Rodale's Encyclopedia of Organic Gardening, for specific pruning guidelines.

APPLE - Most apples require cross-pollination with another apple for best fruit set. *Golden Delicious and Yellow Delicious are both considered good general pollinators for most apples.* Plant in full sun. Regular moisture is required while the fruit is developing so, if we have a dry spell in spring, summer, or fall, be prepared to water the tree. Does best in deep, well-drained soil but will tolerate a variety of situations. Fruit ripens from June to November depending on type. Main pests are apple maggot, codling moth, and plum curculio all of which infest the fruit. We try to source disease-resistant varieties as apples are susceptible to a number of diseases including apple scab, cedar-apple rust (spread from red cedars to apples), powdery mildew, and fireblight. Apples bear flowers and fruit on spurs which are short branches that grow from 2 year old wood or older. Pruning is generally done to promote a pyramidal leader with widely angled branches that are encouraged to grow in a spiral around the trunk. Prune as little as possible in the first 2-5 years, just enough to keep narrow angled branch crotches from developing. Don't let side branches outgrow the leader or secondary branches outgrow primary branches. When pruning mature trees, remove weak, dead, or poorly placed branches and twigs, especially those growing toward the center of the tree. Once the tree is older, you will likely need to remove excess fruit in order to get large, flavorful apples and to keep trees bearing fruit every year instead of alternating years. Remove smaller apples in each cluster before they reach 1" in diameter. Leave one fruit per spur on dwarfed trees, two per spur on larger trees. After thinning, remaining fruits should be at least 6" apart.

APRIUM - A unique new hybrid that is 75% apricot and 25% plum! Their flavors are sweet, complex, and intense predominantly of apricot but sweeter with a hint of plum. Apriums are partially self-fruitful so you can try growing it by itself. For best yields, plant it with another variety of apricot or aprium to pollinate them. Plant in full sun in deep, well-drained soil. Do not plant where tomatoes, potatoes, eggplants, or peppers have been grown in the last two years to avoid problems with verticillium wilt disease. Provide regular water through the growing season. Thin fruits early in the season so they are 3-5 inches apart. Harvest when fruit turns orange and becomes soft. Susceptible to bacterial canker, brown rot, shot hole fungus, and peach twig borer.

PEAR - Pears do best in well-drained, loamy soils but will tolerate damp, heavy soil and less-than-perfect drainage better than other fruit trees. They are vulnerable to drought stress, which causes foliage to turn brown and prevents fruits from enlarging, so water during dry spells in spring, summer, and fall. Pears are very prone to fireblight disease in warm, humid climates like ours. As soon as you see blackened growth on the stem tips, cut it back to a growth bud or stem with green, healthy tissue and be sure to

disinfect your pruners in a bleach solution between cuts. Fireblight is more likely to attack fresh succulent growth and this growth is stimulated by fertilizing and by pruning, especially dormant season pruning in late winter. Therefore, do not prune heavily in any one dormant season, and fertilize lightly. When you do prune, try to remove whole branches down to another branch since no new growth will occur from this type of "thinning" cut. Always remove straight, vertical "water sprouts" coming straight upwards from a limb. Pears prefer a pH of 6.4-6.8. As our soils are usually more acidic than this, you may need to apply lime to the root zone annually. A soil test will confirm if you need to raise the pH, and kits are available in the Nursery Dept. Office.

ASIAN PEAR - Asian pears usually require another Asian pear to pollinate them. Asian pears have crisp, juicy, rounded fruits giving them a different appearance than "regular" (European) pears. Asian pears do well in the South most likely because they are more heat tolerant and also in part because they require fewer hours of winter chill to produce fruit. They are also more resistant to fireblight disease than European pears. Fruits should be thinned to one fruit per spur and picked when ripe.

EUROPEAN PEAR - This is the pear most of us are familiar with. Most European pears we carry require a pollinator such as the 'Keiffer' variety. 'Keiffer' can be grown by itself. Unlike Asian pears, thinning out fruits is not usually necessary. Harvest when the fruit is full size but unripe, then put in a cool, dark place to ripen. If a pear is ready to harvest, the stem will snap free when you lift the fruit so that it is horizontal. If the stem stays intact, wait a few days.

BLACKBERRY - All types bear fruit in the summer. Plant in full sun, or an area with partial midday shade. Blackberries prefer deep, well-drained soil that is high in organic matter. In a clay soil, a good way to accomplish this is to layer 1-2" of pine bark soil conditioner and 2-4" of compost over the planting area and till it in to 6-8" deep. Avoid siting in low-lying areas where water collects. Do not plant where tomatoes, potatoes, eggplants, or peppers have been grown in the last two years to avoid problems with verticillium wilt disease. Most blackberries benefit from being grown on some type of horizontal trellis or support such as a t-trellis or hedgerow trellis. Information about constructing these can be found online. If possible, remove all wild brambles within 500-1,000 feet as they will often spread viruses for which there is no cure. Water blackberries every 7-10 days during the growing season unless the soil is already wet, and be sure to avoid overhead watering so as to prevent fungal disease. Preferred pH is 6.0-6.5 so you may need to apply lime if your soil test indicates a lower pH. As each new cane reaches approximately 48 inches, the growing tips should be cut back. By tipping the ends of the canes before the fruit buds form, new fruit-bearing side shoots are stimulated and berry production is increased. Primocane-fruiting blackberries (e.g., Prime Jim, Prime Jan) bear fruit on new canes (primocanes) that grew during the summer. This is different than floricanes production in which the fruit is produced on canes that grew the previous year. Knowing this helps you to know what parts of the plant to prune since blackberries benefit from annual pruning. Once fruiting is completed and frost has occurred, all primocanes can be pruned or mowed off. An alternative approach is to remove canes in early spring prior to when new growth emerges. Once the fruit has been harvested, the floricanes will eventually die. All spent floricanes should be removed from the blackberry planting. In early spring, select the thickest 6-9 canes per bramble and cut them back to 7 feet. Shorten side branches to 10-15 inches and remove spindly ones. Pick blackberries as early in the day as possible while they are cool, handle gently placing them in a shallow container, and refrigerate immediately. Blackberries are susceptible to the following insects; use the control listed in parentheses after each one: Aphids (insecticidal soap, Organocide, neem spray), Japanese beetles (hand-picking, row covers, beneficial nematodes), spider mites (Mite-X, Organocide), cane borers (cut wilted canes 6 inches below holes and destroy).

BLUEBERRY - Blueberries, especially rabbiteye varieties, do well in the NC Piedmont and are one of the easiest edible fruits to grow here. Most blueberries are not self-fertile, so plant at least two, even three, different varieties near each other for best fruit set. Full sun is best, but up to 50% shade is acceptable. Blueberries prefer a low pH range, 5.3 for rabbiteye types and 5.0 for highbush varieties. Wettable sulfur can be applied, 1 lb. per 100 square feet on sandy soil or 2 lbs. per 100 square feet on heavier soils like clay. In clay soils, it is recommended to incorporate pine bark soil conditioner into the soil. Ask a nursery sales associate for details or consult our Planting Guide for Trees & Shrubs. Blueberries require good drainage, so if your soil is poorly drained, create a raised bed or berm of soil and pine bark soil conditioner or Permatil™ to plant in. Mulch over the planting area with a pine-bark based mulch to help maintain soil acidity as well as protect the root zone, conserve moisture, and keep down weeds. Regular water is absolutely essential the first year after planting. Water blueberries one to two times a week during the growing season unless the soil is already wet. Blueberries can be damaged by too much fertilizer so fertilize lightly in spring preferably with a slow-release or organic fertilizer for acid-loving plants such as Holly-tone. Since blueberries are very shallow-rooted it is best not to cultivate the soil under them after planting. Netting placed over the shrubs while the berries ripen will keep birds from getting to them before you do. Yearly pruning in late winter on older shrubs is beneficial. Remove the thickest, oldest canes, and thin out canes that are crowding each other. Cut back any plants growing too high to harvest conveniently.

CHERRY - Grow all cherries in full sun and in moist, well-drained soil. Regular, deep watering is required. Tart cherries, aka pie cherries, are easier to grow and do better in the South than sweet cherries. They are self-pollinating, more cold-hardy, and tolerate heavier soil better than sweet cherries. Some sweet cherries are self-pollinating and others are not. ('Whitegold' is self-pollinating.) Once the fruit sets, keep an eye on soil water levels. Cherry fruits will mature early and fast. If the soil is too dry in the last two weeks of ripening, the cherries will shrivel, and if it is too wet, they will crack and split. A thick (3-4") layer of mulch spread over the root zone and out to the drip line will help keep soil moisture levels uniform. Irrigate when necessary to keep the soil moist. Cover trees with bird netting and use reflective bird tape before the fruit starts to ripen to prevent birds from damaging and eating the fruit. When picking, be careful not to tear off the fruit spurs (small woody twigs to which the cherry stems are attached). Prune cherries to promote a modified central leader system (see suggested references on p.1). Prune tart cherries lightly each winter to stimulate new growth and thin tangled branches. Prune sweet cherries less frequently, only every third or fourth year. Cherries are

susceptible to several insect pests and diseases. Keeping them healthy and unstressed will reduce these problems.

FIG - Figs are one of the easier types of fruit to grow in our region. Trees are generally low-branched and spreading and grow fairly fast to 15-30 feet. Can be grown in large containers (which may need winter protection) or espaliered on a wall or fence. Figs do not need pollinating to produce crops. Most figs will fruit in early to mid summer on last year's wood and again in early fall on the current season's growth. Plant in full sun, provide regular water, and do not use high-nitrogen fertilizers which will produce a lot of foliage at the expense of fruit. Prune lightly in winter to remove dead wood, crossing branches, or low branches that obstruct traffic. Runaway shoots can be cut back in any season. Ripe fruit detaches easily when lifted and bent back toward the branch. Bird netting and other deterrents may be required to protect figs from birds. Clean up any fallen fruit in fall. Interesting fact: figs are actually a false fruit whose flowers are produced on the interior of the "fruit".

GRAPE - Muscadine grapes are native and are more pest and disease resistant than European bunch or table grapes. We have tried, though, to select table grapes most suited for our region to offer our customers. Plant in full sun and in well-drained soil. Do not plant where water stands after a rain. Grapevines will need an arbor or large grape trellis to grow on as they are quite vigorous and these should be in place before planting. A single (No. 9) wire 5 to 6 feet above the ground and well-anchored on each side is one of the easiest trellises to construct and maintain. A space at least 10 feet long and 6 feet wide should be provided for each vine. Avoid overfertilizing which will result in rampant growth but not much fruit. Grapevines will bear by their third or fourth year. Harvest them when the fruit tastes ripe. Grapes require specific pruning and training over the first few years if you want to grow them for maximum fruit yields. Consult a reference such as the Southern Living Garden Book or the NC State website (<http://www.ces.ncsu.edu/depts/hort/hil/hil-8203.html>) for pruning guidelines and diagrams. Do not use the combination of fertilizer plus weed killer on lawn areas near a grape vine; the weed killer may be picked up by the grape roots, and cause vine injury.

Muscadine grapes - easiest to grow organically and can usually be produced without insecticide and fungicide. Apply and work in dolomitic lime at rates recommended by a soil test to bring the soil pH to 6.5 before planting. Water regularly for the first two years after which they should not require supplemental water since muscadines are very drought tolerant. Apply the label-recommended rates of balanced ratio organic fertilizer in an 18-inch circle around each vine after planting (late April to early May). Repeat 6 weeks later in June. Do not put the fertilizer closer than 21 inches from the trunk. You can also topdress annually over the root zone with a good quality compost. Japanese beetles are typically the most damaging insects to grapes.

Bunch or Table Grapes - Spray table grape vines in February with lime-sulfur or Bordeaux mix to help control diseases. Apply dormant oil in winter (BUT NOT within 30 days of applying lime sulfur) to help control overwintering insects. Making sure table grapes are sited well (full sun, good air circulation, good soil drainage) will help promote healthy vines. Proper fertilization is essential to high yields and quality. Before planting vines, broadcast and work fertilizer and lime into the soil as indicated by the soil test (usually about 2 pounds of fertilizer and 5 pounds of dolomitic limestone per 100 square feet). Table grapes will take a soil pH between 5.5 and 7.0. Incorporate the label-recommended amounts of a balanced ratio organic fertilizer in spring and early summer. You can also topdress annually over the root zone with a good quality compost. For at least the first two years, keep an area 1 to 2 feet in diameter around each vine free of weeds by hoeing, hand cultivation, or mulching.

JUJUBE - Also known as Chinese date, fruits are sized between a cherry and a plum with shiny mahogany skin and a white flesh that is crisp and lightly sweet, not unlike an apple. Some leave the fruit to ripen longer at which point it dries and wrinkles, and the flesh becomes beige and more concentrated in flavor. Fruits ripen in late summer and fall. Trees are small and deciduous with small glossy leaves and a somewhat weeping habit. Plant in full sun. Jujubes are not fussy about soil. May require pruning to cut off suckers coming up from the roots.

PEACH - Peaches need full sun, good drainage, and regular water for best fruiting, and are not low maintenance plants. If you want to grow them organically, you will need to be satisfied with less-than-perfect fruits. Peaches are self-fruitful and do not require another peach for pollination. The preferred pH range for peaches is 6.0-6.5, so you may need to lime them as our soils tend to be more acidic than that. (A soil test will tell you that.) Amend the soil as outlined in our Planting Guide. Peaches tend to set too much fruit, even with good pruning, so when fruits are about 1" wide, thin out some of the excess fruits so the remaining fruits are about 8-10 inches apart. In late winter, prune mature trees by cutting off two-thirds of the previous year's growth by removing two of every three branches formed that year, or head back each branch to one-third its length. Spray peach trees with lime-sulfur or Bordeaux mix after the first leaf drop in fall and in early spring before the buds swell. To control disease such as peach leaf curl and brown rot, use sprays combining horticultural oil with lime-sulfur.

PERSIMMON - Persimmons are easy to grow and adaptable trees for our region. They tend to be relatively free from insect and disease problems. Apply and work in dolomitic lime at rates recommended by a soil test to bring the soil pH to 6.0- 6.5 before planting. Try not to damage fragile roots when planting. Persimmons are generally broken into two groups: astringent and non-astringent. Astringent types, such as 'Hachiya' are not sweet until the fruit is mushy ripe, and are generally considered better for use in breads, puddings, and cookies where they are very useful and delicious. Non-astringent types, such as 'Fuyu' and 'Jiro' can be eaten once the fruit is fully colored but still firm. Fruits typically ripen in early to mid fall. Though they are tolerant of a variety of soils, persimmons are best planted in full sun and in well-drained soil. Water regularly until established and thereafter during extended dry spells to preserve fruit quality and quantity. Persimmon trees are generally trained to a modified central leader system (see suggested references on p. 1). You should always cut away suckers coming up from the roots. Pruning is required to renew fruiting wood since flowers are borne on current season's wood. New growth can be stimulated with moderate pruning cuts every 1 to 2 years. Pruning will also give a strong framework for the tree to bear a heavy crop load. This is important because persimmon wood is brittle and breaks easily with heavy crops. One of the few problems persimmons have is "alternate year bearing" in which they will fail to produce fruit the year after a successful crop. There are various reasons this occurs including

crop load, tree age, vigor, soil moisture, and pollination requirements. ('Jiro' and 'Fuyu' are self-fruitful and do not require another persimmon for pollination.) After harvest fruit may be stored in the fridge for several weeks. Peeled and pureed fruit can also be stored in the freezer.

PLUM - Plant in full sun. Plums will tolerate many soil types but do best in fertile, well-drained soil. We recommend amending heavy clay soils. Japanese plums, such as 'Methley', need less winter chill, better tolerate heat and humidity, and have fewer disease and pest problems. As such, they perform better in the South than European plums. Most will grow to about 10-15 feet tall depending on variety. Japanese plums are more productive when two varieties are planted. Prune young trees in order to achieve a vase shape, to promote air circulation, and to avoid the formation of V-shaped branch crotches (wider angle attachments of branches to trunk are preferred). Common diseases and pests include black knot (prune away 4 inches below diseased area), bacterial canker (avoid leaving stubs when pruning & remove dead or broken branches right away), brown rot, plum curculio, and scale insects. Apply dormant oil/lime sulfur sprays in late winter to help control many of these. Thin fruits to 4-6" apart on heavy-bearing trees to avoid damage to the tree.

POMEGRANATE - Pomegranates are self-fruitful so only one is required to produce fruit (besides the usual help from insects and hummingbirds). A minimum of 6 hours of sunlight per day is needed for good fruit production. They perform best in deep, loamy soils but will also succeed in sandy and clay soils. Ideal pH range is 5.5 to 7.2 so you may need to add lime to the planting hole and top dress with lime periodically if your soil test shows a lower pH as can be common in our acidic soils. Air circulation is important in humid climates such as ours to make sure plants set fruit and don't abort existing fruit. Open, sunny areas on slopes are best for this. Though pomegranates are drought tolerant, you will have healthier, more robust plants and better fruiting if you water during dry spells. Avoid overhead watering and use drip irrigation or a hose placed at the root zone instead. Fertilize in spring (around April) with a balanced fertilizer that also contains micronutrients, such as Garden-tone™. Light annual pruning of established trees should be done in late winter to encourage the growth of new fruit spurs as fruit is produced only on the tips of new growth. Hard pruning will reduce fruit yields, however. It is recommended that, for the first 3 years, the branches be judiciously shortened annually to encourage the maximum number of new shoots on all sides, to prevent straggly development, and to achieve a strong, well-framed plant. After the 3rd year, only suckers and dead branches are removed. The goal in pruning is to produce an open, vase-shaped tree with enough side (lateral) branches to support the tree without reducing airflow and penetration of sunlight. In midsummer, prune out unwanted suckers coming from the base of the plant. Fruits mature near the end of August for early varieties through October or November for later varieties. Listen for a metallic "ting" when you tap the fruit to determine if it ripe. Harvest fruits with clipping shears to avoid damaging branches.

RASPBERRY- Raspberries, in general, are not really adapted for much of the South. Therefore, good culture is key for success. Plant raspberries in full sun or mostly full sun with some afternoon shade, and provide regular water. Good soil drainage is essential, so plant them up in berms or raised beds. Slightly acid soil of 6.0-6.5 is ideal which may mean you will need to add lime if a soil test indicates your soil has a lower pH which is common in our soils. When the plants are flowering and fruiting be sure to keep them well-watered. Fertilize at bloom time with a balanced fertilizer or well-aged manure (25-50 lbs. per 100 ft. of row). Most raspberries benefit from being grown on some type of horizontal trellis or support such as a t-trellis or hedgerow trellis. Information about constructing these can be found online. If possible, remove all wild brambles within 500-1,000 feet as they will often spread viruses for which there is no cure. Summer-bearing raspberries (red raspberries) bear fruit on second-year canes called floricanes. Prune bearing canes off at ground level immediately after the harvest is over. Prune again in late winter before new growth starts. Remove spindly canes and thin the remaining canes to leave 2 to 4 of the largest straightest canes per foot of row. Cut away also any suckers growing outside of the row. The remaining canes should be cut back to 4-5 feet. Everbearing raspberries such as 'Heritage' will fruit in their first autumn on the top third of the cane and in their second summer the lower two-thirds of the cane. Cut off upper portion that fruited in autumn and leave the lower portion to bear the next summer. Cut out the entire cane once it has fruited along its whole length. Alternate recommendations for pruning 'Heritage' are to cut down all the canes to the soil surface in late fall which will eliminate the June crop but maximize the following summer's crop. To control diseases, spray with lime-sulfur when the plants are dormant in winter and again when bloom time begins which will also help control insect problems. Raspberries are ripe when they slip easily off the stem when picked leaving a hollow inside the fruit. They are best picked in the morning when the fruit is dry, placed gently into a shallow container, and refrigerated immediately.