

Peaches, Nectarines, Plums, Apricots, Cherries . . .

Climate Puts Limits on What You Can Raise

by John H. Weinberger and Harold W. Fogle

Growing peaches or other stone fruits in your home garden can reward you with luscious, tree-ripened fruit. But you must give your trees the care they require. Here are three specifics:

—Regular sprays for insect and disease control are absolute necessities to growing unblemished fruits.

—Birds and bees will take their share unless you protect ripening fruits.

—You must select varieties adapted to your climate to be assured of regular crops.

Despite such requirements, the opportunity to have fruits of various flavors, tastes and textures for up to six months in your home garden is a real inducement to plant stone fruits.

Peaches, nectarines, plums, apricots and cherries are called stone fruits because they have a hard, stony pit. They can be eaten fresh, or saved for future enjoyment by canning, preserving, freezing, or drying. Sour cherries are most often used in pies.

The climate where you live limits your selection of the kinds of stone fruits you can grow. Individual varieties must be adapted also. One or more of the stone fruits can be grown in every State except Alaska.

Low winter temperatures hamper the growing of stone fruits in Northern States. Some fruit buds of peaches, nectarines, and Japanese plums are usually killed by temperatures below 0° F and a reduced crop results. Lower temperatures damage

or may kill the trees. European and native plums, cherries and apricots are hardier in fruit bud and wood than peaches or Japanese plums.

Along the southern border of the country, winter temperatures may be too high to break the rest period of the buds of many varieties. Only varieties with a low chilling requirement succeed there. In the vast area of the country between the marginal areas most stone fruits can be grown successfully.

Nectarines do best in a climate where rain rarely falls in the three weeks before ripening. They are very susceptible to brown rot disease.

Japanese plums, except for a few varieties, are not adapted to the humid climate of the Southeast. Diseases affect the trees and the fruits of most varieties.

Apricots bloom early in spring. The blossoms are usually killed by frost or freezes each year in all but the most favorable locations.

Sweet cherries are not adaptable to the extreme North or South. Everywhere birds will get a good share of the fruit before the home gardener is ready to harvest unless the tree is protected by netting or otherwise.

Peaches should receive first consideration by the home gardener for their wide adaptability, long ripening period, and ease of growing. Nectarines, where adaptable, are equally as good.

European plums need more care than peaches. They bloom later than Japanese plums and may escape frost. Japanese plums, where adapted, produce large and attractive fruits with a minimum of care.

Apricots in the home garden should be tried only in commercial apricot-growing regions.

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Sweet cherry trees reach large size, which adds to the problem of growing them in a backyard.

Contact your county Extension office for recommended variety lists and cultural practices.

Location, Spacing

Stone fruit trees should not be planted in a low or frosty location, where frost damage to blossoms and young fruits is probable. Moderately elevated ground or a slope will provide the necessary air drainage. Temperatures below 30° F will kill most fruits.

The soil should be reasonably fertile, with a pH of 5.5 to 6.5. Poorly drained soils are not suitable for stone fruits. Avoid planting trees in the permanent sod part of the lawn. Plant them in border plots or edges of the lawn. Fruit trees need full sun. Do not plant them in the shade of larger trees.

Peach, nectarine, plum, and sour cherry trees need the least space for maximum production; 18 to 24 feet is adequate. Apricot and sweet cherries need 25 to 30 feet. Peach and plum trees can be kept small by pruning and maintained in a 10- to 12-foot spacing if necessary.

All fruit can be picked from the ground if trees are kept low by pruning. Training trees on a wall or wire trellis is practical where space is limited.

A single tree can have fruit ripening over several months if three to six early, medium and late ripening varieties are budded into one tree. Budding is best done in late August while the bark still slips. The buds remain dormant until spring, when they are forced by cutting off the branch just above the bud. The ordinary "T" bud is the simplest type to use.

Sweet cherries and some Japanese plum varieties require cross-pollination in order to set fruit. A tree of another variety capable of cross-fer-

tilization must be planted nearby. For best results select two varieties to plant which are known to be cross-fertile. An alternative is to bud or graft a branch of the pollinator variety in the desired tree.

Nearly all peach, nectarine and apricot varieties set fruit with their own pollen. Avoid self-sterile varieties of these fruits.

Select only varieties which do well in your locality. The fruits should have good flavor and smooth texture to make your efforts worthwhile. Extreme firmness and slow softening are not necessary since the fruit will not be shipped. On the other hand, rapid softening makes handling difficult.

Fruits of most commercial varieties will fill these requirements satisfactorily when picked at their peak of perfection. Do not let nostalgia for old varieties overly influence your choice. Peaches, nectarines, and plums have been much improved in recent years.

Hundreds of peach varieties are available. Freestone peaches are preferred for fresh use and for freezing. Both freestone and clingstone peaches may be canned. Varieties grown in the humid region east of the Rocky Mountains are usually different from those grown in dry irrigated areas west of the Rockies.

For the eastern part of the country, a succession of varieties in time of ripening from early to late would be Springold, Candor, Early Redhaven, Dixired, Harbrite, Redhaven, Redglobe, Loring, Redskin, and Monroe.

In States from Texas to Maryland where bacterial leaf spot disease is a problem, give special consideration to resistant varieties such as Sentinel, Ranger, and Dixiland.

Special varieties having a low chilling requirement are needed where winters are too warm for the above varieties. These include Maygold, Junegold, and Suwanee. Deserigold and Flordasun, which require even

less chilling, are suitable for central Florida and the Rio Grande Valley.

A succession of peach varieties for the dry, irrigated areas west of the Rocky Mountains are Springgold, Springcrest, Royal May, Flavorcrest, Regina, Redtop, Suncrest, Fayette, Summerset, and Fairtime. They ripen from mid-April to mid-September. Firm-fleshed clingstone peaches for canning are Loadel, Andross, and Halford. Junegold, Sunnyside, and Fairway varieties are freestones adapted to warmer areas of the region. Desertgold can be grown where winters are short.

Some of these peach varieties may not be available in your area. You might visit a local fruitstand where you can select a locally-grown, adapted variety suiting your needs.

Nectarines are beautiful fruits. In recent years some non-patented varieties have been developed which are available to the home gardener. The earliest is Firebrite, followed in order by Independence, Flavortop, Fantasia, Late Le Grand, Flamekist, and Fairlane. Fairlane ripens about September 1 in California. Remember that in humid climates, nectarines are harder to grow than peaches.

Plum Varieties

European plums can be grown in most States, including some of those too cold for peaches. Suggested varieties are the self-fruitful Fellenberg (Italian Prune), Stanley, and Shropshire. In the Far West, Tragedy and President can be grown and they pollinate each other. French Prune is used for drying. It is self-fertile and can be planted alone.

Varieties developed from native American species of plums are available for areas with severe winters.

Japanese plums ripen from May to September in California. A succession of varieties in season of ripening is Burmosa, Santa Rosa, El Dorado, Laroda, Friar, and Casselman. Santa

Rosa, and Casselman are partially self-fertile and will pollinate the other varieties. In the Southeast, Frontier and Ozark Premier can be grown. Frontier needs cross-pollination. Methley and Santa Rosa are useful farther north.

Frost-protected locations are best for Japanese plums because of their early blossoming.

Blenheim (Royal), Tilton, and Castleton are suitable apricot varieties in California. In other areas Wenatchee (Moorpark), Goldrich, and Early Golden may be used. Apricots bloom earlier than Japanese plums.



Robert Bjork

A sour cherry variety.

The home gardener who wishes to challenge the birds for his crop of sweet cherries might plant Bing, Rainier or Van. They ripen in June and July. Two or more varieties are needed for pollination.

Sour cherry varieties available are Montmoureny, English Morello, and Early Richmond.

Planting

A commercial nursery is the most convenient source of trees for the home gardener. Trees are graded by height in feet, or trunk caliper in inches. A medium-sized tree (4 to 6 feet in height or $\frac{1}{2}$ to $\frac{5}{8}$ inch in diameter) often gives best survival and growth.

Trees should be dormant when

planted. Spring planting is satisfactory in most areas providing the trees are kept dormant before planting. Fall or winter planting also is satisfactory and sometimes preferred in southern areas. If conditions are not suitable for planting at time of purchase, store in moist cellar or "heel-in" outdoors in a trench. Keep the roots moist and cool but avoid freezing.

Remove broken or diseased roots. If the roots have dried out in handling, soak them for several hours or overnight. Avoid planting when roots might be exposed to freezing. Plant the tree 1 or 2 inches deeper than it was growing in the nursery. Fill around the roots with topsoil, and tamp the soil. If the soil is dry, add 1 or 2 gallons of water to the hole. Fill the hole with soil and round off slightly.

Trees usually bear their first appreciable crop the third or fourth year after planting.

At planting time, the nursery tree usually has a single upright stem which should be cut back to 24 to 36 inches. This cut should be just above a mature bud. If there are wide-angled, strong lateral branches, select 2 to 4 which are separated up to 6 inches and spaced around the trunk. Tip these slightly. Remove or severely stub remaining laterals.

Select 3 or 4 scaffold branches during the first dormant period. These selected branches become the tree's primary framework.

Pruning should be minimal until the tree bears fruit. Unpruned trees tend to bear younger than pruned ones. However, branches which cross or interfere with good exposure of the scaffolds should be removed. An open-centered vase-type tree will give good exposure. Some secondary branches may be kept for early fruit and protection of the trunk and crotches from sunscald, but they should not interfere with the tree's basic framework.



In mature trees, keep vigorous current-season wood coming along to bear next year's crop of peaches and nectarines. The other stone fruits produce spurs which bear part of the fruit. Cut the tops back to reasonable picking height but change the height of cuts slightly each year. Prune to renew the bearing wood annually.

Fertilization

Most of the 12 nutrient elements essential for growth are available in nearly all soils. The tree's growth and production can tell you which ones are deficient. Leaf sample tests may be useful in diagnosing deficiencies.

Nitrogen is most often needed. A tree deficient in nitrogen will have light green to yellowish foliage and reduced shoot growth. In severe cases of N deficiency, small leaves, red specks on leaves and sometimes on fruit, misshapen and insipid fruit, and greatly reduced growth are com-

Peach tree with well-spaced, strong scaffold limbs and open center for maximum exposure to light on the fruit-bearing surface.

mon symptoms. Excessive nitrogen causes rank growth, poor fruit color and flavor, and may subject the tree to winter damage.

The dormant period is a convenient time to apply fertilizers. For a tree growing in sod, you need extra fertilizer to satisfy requirements of both tree and sod.

To remove competition for nutrients and water, keep a bare area under the spread of the tree by cultivation, herbicides or mulches.

Apply a complete fertilizer (10-10-10 or similar mixture) after the newly planted tree starts to put out leaves.

Each subsequent year apply fertilizer in amounts judged necessary for the individual tree based on appearance or leaf analysis. An approximate amount to apply is $\frac{1}{8}$ pound of actual nitrogen per year of tree age up to 1 pound per tree. Spread the fertilizer evenly in a circle slightly larger than the tree spread. Applications may be split, with part applied during the growing season. Avoid nitrogen applications after late July in northern areas.

Regular irrigation in arid areas is needed, and supplemental irrigation in natural rainfall areas is desirable. A temporary drought, particularly during the month before harvest, may severely reduce fruit size and quality, even though the annual rainfall is adequate. Sod or shallow-rooted plants will show water stress before the tree suffers from lack of moisture.

Avoid frequent light irrigation. Instead soak the soil thoroughly to root depth and wait for signs of moisture stress in the indicator plant before irrigating again. Too heavy or too frequent irrigation may damage roots. Cherries are particularly susceptible to excessive moisture.

Heavier soils—particularly those with considerable clay—require less frequent irrigation than light, sandy soils and are subject to slower loss of nutrients to the subsoil.

Frost Protection

Protecting fruit trees from frost is difficult in the backyard. Anti-smog restrictions prohibit use of smudge pots or similar protection.

Choose the most frost-free site available before planting. Record the minimum temperatures in available sites for at least a year in critical areas. Avoid planting in draws or basins where cold air settles. Higher elevations are usually best, but wind-swept knolls should be avoided.

Covering trees with tarpaulins or other material to prevent radiation cooling is one way of protecting them. However, some framework is usually necessary to avoid tree damage. It is cumbersome to cover large trees, and the cover must be left on until air temperature is safely above freezing and then removed before damaging heat is built up. Hence, covering is usually impractical except for small trees.

Low volume sprinkling can be used for frost control. Pruning must be altered to give a heavy, stiff framework to hold the ice load from all-night sprinkling. Protection depends on a continuous film of unfrozen water which releases heat for bud protection. Sprinkling must be continued until air temperature is well above freezing or the night's effort may be lost.

Don't try growing stone fruits unless you provide for adequate pest control. You need spray equipment capable of reaching the tops of mature trees, or you need to be able to hire a custom spraying service when required.

Obtain and follow carefully the pest control calendar from your county Extension office. Timing of sprays is extremely important. Use only currently recommended materials at the rates specified.

Brown rot, caused by *Monilinia* spp., destroys more ripening fruit than any other pest. This is particu-

larly serious in areas where it rains during and just before harvest. Removal of rotting fruit and "mummies" from the trees will help control spread of the fungus.

Scab, leaf curl, and cherry leafspot usually are not troublesome if trees are sprayed regularly. Bacterial leaf spot is not adequately controlled by spraying in extremely sandy soils of the Eastern United States—resistant varieties should be planted.

William E. Carnahan



Several virus and virus-like diseases can spread unchecked unless diseased trees are recognized and removed. They will not recover, and endanger nearby trees.

Precise timing of sprays should give adequate control of insects. However, missed sprays can result in wormy fruit, dead "flags" in the terminal growth, girdling of trunks by borers, or leaf damage by aphids and mites.

Protecting trunks from mice and rabbits with wire screens or plastic wrap-arounds may be necessary on trees growing near forests. Covering ripening fruit with netting is often the only way to protect it from birds and squirrels.

Fruit Thinning

Adequate dormant pruning removes a large number of flower buds. Pruning is the only practical thinning method for cherries, and can do a partial thinning in the other stone fruits. Heavy pruning may reduce the number of buds too drastically if later frosts kill additional fruit buds.

Additional thinning usually is needed after fruits have started development. Trees overloaded with fruit must have the crop thinned out to produce fruit of adequate size and good quality, and to prevent limb breakage.

Peaches, nectarines, plums, and apricots should be spaced 6 to 8 inches apart. Early ripening varieties need the greater spacing, and must be thinned early to give large fruit. Later varieties can be thinned at the pith-hardening stage without much loss in final size.

The advantage of homegrown fruit is that the best quality possible can be attained by ripening it on the tree. Most fruit for commercial use must

It's tempting to want to leave all the fruit on a peach tree. By thinning the peaches, those left on tree will be larger.

be picked three to seven days before soft ripeness to withstand handling and shipping.

Ripeness can be estimated by the disappearance of green and the development of yellow undercolor. Pressing the pads of your fingers against a fruit in your cupped hands will indicate softening of the fruit without damaging it. The fruit should be harvested by this same method, adding a slight twist of the wrist to loosen the fruit from its stem.

Pick the fruit into shallow containers to keep bruising at a minimum. Handle the fruit gently in moving and transporting it.

Fruit which will be used within a short time need not be refrigerated. It will attain its best quality in relatively warm storage.

Most varieties of fruit can be held in refrigerated storage for two to three weeks without excessive loss of quality. Longer storage usually results in internal breakdown of the flesh.

Stored fruit should be checked regularly for rotting or internal breakdown. Use the fruit as close to its prime quality as possible.

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