

host plant with auxins, cytosines, gibberellins and growth-regulating B vitamins [6] to fortify these compounds already produced by the plant and thereby increase plant growth or response.

Sterile Soils

It has been proven that on chemically fumigated soils that are deficient in mycorrhizae it results in plants inability to take up phosphorous [8] and plants grow better in pasturized soils that have been inoculated with certain VA fungi [3].

Summary

The home gardener can successfully grow plants in soils that have a good level of mycorrhizae inoculum with a low fertility level and variable moisture. Chemical fumigation or soil pasturization reduces the mycorrhizae population and can reduce plant response and growth. Good soil management such as the incorporation of organic material into the soil profile and minimizing excessive cultivation will increase the soil mycorrhizae level and give increased plant growth.

"But the best news of all is that mycorrhizal fungi may

soon be available in quantities to commercial growers; it may even be in plant stores for the use of the weekend gardener" [1].

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DECIDUOUS FRUIT FOR THE DOORYARD LANDSCAPE

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Abstract. Many deciduous fruits can be used in landscaping the dooryard to provide both beauty and fruit. The various deciduous fruits for the state will be discussed with attention to the location of the plants and the limitations of the various cultivars in north, central and south Florida.

Many deciduous fruit cultivars can be used in the Florida landscape to enhance the beauty of the homesite and to supply fruit for fresh or processed consumption. Florida is unique in that a fairly complete range from temperate to subtropical fruit trees may be raised in some part of the state. Selection of fruit species that are properly adapted to a given area is essential if the plants are to survive [1]. Chilling requirements of deciduous fruit plants determine whether a cultivar will grow in a given location. The average number of chilling units (hours) that may be expected in Florida during a normal year can vary from as few as 50 in south Florida to as many as 650 in north Florida. Hours of temperatures below 45°F (7°C) are the units used and the total number of hours below 45°F accumulated through the winter gives the total chilling units for an area.

Table 1. Deciduous fruit varieties.

Deciduous fruit enjoy greatest success in north Florida, but there are varieties recommended for all climatic zones.

Variety	Zone ¹		
APPLE			
Ein Shemer	N		
Anna ²	N	C	
Dorsett Golden	N	C	
BLACKBERRY			
Brazos	N	C	S
Floradagrand ³		C	S
Oklawaha ³		C	S
BLUEBERRY			
Climax ⁴	N		
Blue Belle ⁴	N		
Briteblue ⁴	N		
Southland ⁴	N		
Tifblue ⁴	N		
Bluegem ⁵	N		
Delite ⁵	N		
Woodard ⁵	N		
Flordablue ⁶		C	
Sharpblue ⁶		C	
Aliceblue ⁷	N	C	
Beckyblue ⁷	N	C	
FIG			
Alma	N	C	S
Brown Turkey ⁷	N	C	S
Celeste	N	C	S
Green Ischia	N	C	S
Magnolia	N	C	S
San Piero	N	C	S
GRAPE, BUNCH			
Blue Lake	N	C	
Lake Emerald	N	C	
Stover	N	C	
Roucanef	N	C	
GRAPE, MUSCADINE			
Creek ⁸	N		
Dearing	N	C	
Fry ⁸	N	C	

Table 1. (Cont.).

Variety	Zone ¹		
Higgins ⁸	N	C	
Magnolia	N	C	
Topsail ⁸	N	C	
Welder	N	C	
Chief	N	C	S
Cowart	N	C	S
Dixie	N	C	S
Hunt ⁸	N	C	S
Magoon	N	C	S
Southland	N	C	S
Thomas ⁸	N	C	S
NECTARINE ⁹			
Sungold	N		
Sunlite ¹⁰	N		
Sunrich	N		
Sunripe	N		
Sunred		C	
PEAR			
Ayres	N		
Baldwin	N		
Orient	N		
Hood	N	C	
Pineapple	N	C	
PEACH ⁹			
Junegold	N		
Maygold	N		
Rio Grande	N		
Springbrite	N		
Springcrest	N		
Springtime	N		
Suwanee	N		
Flordagold	N	C	
Early Amber		C	
Flordasun		C	
McRed		C	
Flordabelle		C	S
Flordawon		C	S
Flordared			S
Red Ceylon			S
PECAN			
Elliot	N		
Stuart	N		
Curtis	N	C	
Desirable	N	C	
Moreland	N	C	
PERSIMMON			
Fuyu (Fuyugaki)	N	C	
Hachiya	N	C	
Hanafuyu	N	C	
Hayakume	N	C	
O'Gosho	N	C	
Saijo	N	C	
Tamopan	N	C	
Tanenashi	N	C	
PLUM			
Early Bruce ⁸	N		
Excelsior	N		
Kelsey	N		
Mariposa ⁸	N		
Methley ¹¹	N		
Ozark Premier	N		
RASPBERRY			
Dorman Red	N		
Mysore			S

¹N = north Florida, C = central Florida, S = south Florida.

²Requires pollinizer variety.

³Self-unfruitful, must be planted together.

^{4, 5, 6}Requires 2 or more varieties (with the same number) for best results.

⁷Do not plant 'California Brown Turkey'.

⁸Female variety, requires a non-female variety for pollination.

⁹Must be 'Okinawa' or 'Nemaguard' rootstock.

¹⁰Only in warmer parts of North Zone.

¹¹Western Panhandle only.

Apple. The apple has many uses in the dooryard. One of the best uses for the apple is as a center plant. The apple can also be used as a border plant and works well as a hedge or screening plant between buildings. The tree does

best in well-drained soil and 2 cultivars should be planted for cross-pollination. The apple requires training and pruning, and a demanding spray schedule must be followed for insect and disease control in order to have attractive fruit.

Blackberry. The blackberry is well adapted for use in the dooryard landscape. Possibly the best use for the blackberry is as a hedge plant between buildings or as a screen. The blackberry is a vigorous grower and requires pruning every year. The blackberry fruits heavily, therefore, it does not take many plants to supply a family with plenty of fruit for both processing and fresh berries. The blackberry is usually a low maintenance plant and requires little work for backyard production. Keeping the blackberry within bounds may be troublesome since it tends to become very aggressive if not kept within a hedgerow. It is adapted to most Florida soils.

Blueberries. Blueberries are an attractive plant for central and north Florida. The one demanding factor of blueberry is that it requires a low soil pH in the range of 4.0-6.0. The blueberry will adjust very well as a centered plant but is probably best used in hedgerows for screening.

The blueberry is an excellent landscape plant because it has beautiful white flowers during the spring followed by green growth during the summer and beautiful red fall coloration. The blueberry is usually pest-free, not demanding any spray for insect or disease control. The plant is vigorous and will require pruning to keep within bounds. If rabbiteye blueberries are grown, 2 varieties should be planted for cross-pollination.

Fig. The fig can be used in dooryard landscaping as a center plant or as a border plant next to buildings. The fig is usually quite productive and performs very nicely in the dooryard. The fig is frequently troubled by rootknot nematodes, but heavy mulching and frequent watering can alleviate this problem. Ripe figs must be picked or the birds will harvest most of them.

Grapes, bunch. Grapes can be grown in central and north Florida with the bunch grape producing fruit that is very much like the Concord grape of the northern United States. Because the grape must be trained and trellised, it requires more work than most other plants. The grape also requires a more rigorous spray schedule than most other deciduous fruits. Trellising bunch grapes offers many opportunities for creative imagination. Vines can be hedgerowed, trellised over the patio, or managed in various other ways. The bunch grape likes a well-drained soil.

Grapes, muscadine. The muscadine grape is a very adaptable plant for the dooryard landscape. The grape can be used on an arbor, trellised on a patio for fruit and shade, or used as a screening plant. The muscadine grape demands a strenuous training and pruning schedule but requires less insect and disease spraying than the bunch grape. The muscadine grape needs a well-drained soil, and requires attention to pollination on some varieties (Table 1).

Nectarines. The nectarine is a fuzzless peach and will do very well as a centered plant. Its beautiful flowers during the spring are followed by luscious fruit. This plant requires a very stringent spray schedule for both fruit and tree diseases and insects and needs extensive pruning. Therefore, it should be used only where the grower has some degree of horticultural expertise. Proper cultivar selection is extremely important. Nectarines need a well-drained soil.

Peaches. Peaches are the queen of fruits. The showy blooms in the spring are useful in the landscape plan and are followed by luscious fruit. Growing peaches requires some horticultural expertise because of the extensive pruning and insect and disease control needed to produce quality fruit. As with nectarines, cultivar selection is very important.

Pears. There are many sand (hard) pears that can be grown in Florida. Unfortunately, the softer-fleshed pears commonly sold in grocery stores are not adapted to Florida. Pear trees find their best use as specimen plants. The trees have a beautiful showy white bloom in the spring which is usually followed by a large crop of pears that can be eaten fresh or used for processing. Pears usually require little insect and disease control. Possibly the 2 biggest problems are fire-blight and leaf spot. Fire-blight is controlled by planting tolerant varieties and leaf spot can be controlled with 1 or 2 sprays.

Pecans. Pecans are one of the most widely used shade trees in north Florida. The pecan can be grown throughout the entire state and should be used in the dooryard as a shade tree. Since pecans are such large trees they should be planted at least 60 feet apart for best results. Outside of commercial orchards, pecans should be planted for the beauty and shade rather than for their nuts, since nut production is often disappointing in the dooryard.

Persimmon. Persimmons are deciduous trees with beautiful green foliage during summer. The persimmon in the fall adds to the dooryard landscape since it has beautiful orange colored fruit. The leaves of some varieties also turn

orange in the fall, and this provides color in the landscape during a time of the year when color is usually lacking. Fruit come in astringent and non astringent types, the latter being most popular. The persimmon usually *requires only* a dormant oil spray in the winter for good fruit production.

Plums. The plum is a small tree and one that can be used for spring color with its white showy bloom. The plum is usually used as a center planting but can be used as a hedgerow or screening plant. The plum, like peaches and nectarines, requires an extensive insect and disease control program and some pruning.

Raspberry. The raspberry is very much like the blackberry in that its best adaptation is probably as a hedgerow. The raspberry requires pruning each year to keep it in bounds but is otherwise fairly trouble-free.

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COLD-HARDINESS CONSIDERATIONS FOR CITRUS IN THE FLORIDA LANDSCAPE

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Abstract. Some varieties of citrus can be grown successfully in the home landscape of most areas of Florida. Such plants are not only attractive ornamentals but can provide the homeowner with delicious fresh fruit. Cold-hardy citrus variety selection is discussed with respect to the major geographic areas of the state. Evaluation of the potential planting site with respect to possible cold damage is outlined.

Citrus is big business in Florida. The industry is now over 400 years old and there are some 850,000 acres (340,000 ha) in commercial production. However, even with a seemingly inexhaustible supply of citrus virtually at our fingertips, almost everyone who lives in Florida wants to have a citrus tree in the dooryard. This is not difficult to understand since the citrus tree is a lovely ever-green plant which, given proper care, can furnish the grower with an abundance of delicious fruit every year.

Citrus is a subtropical plant and will not tolerate temperatures much below freezing. Florida has a subtropical climate, but there are few areas in the state which escape all freezing temperatures. In general, the probability of a damaging freeze increases with northerly latitude.

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Climatic Zones

Florida is often divided into climatic zones (Fig. 1.). Each of these zones has a particular probability of damaging cold and consequently, a certain risk of damage to citrus trees.

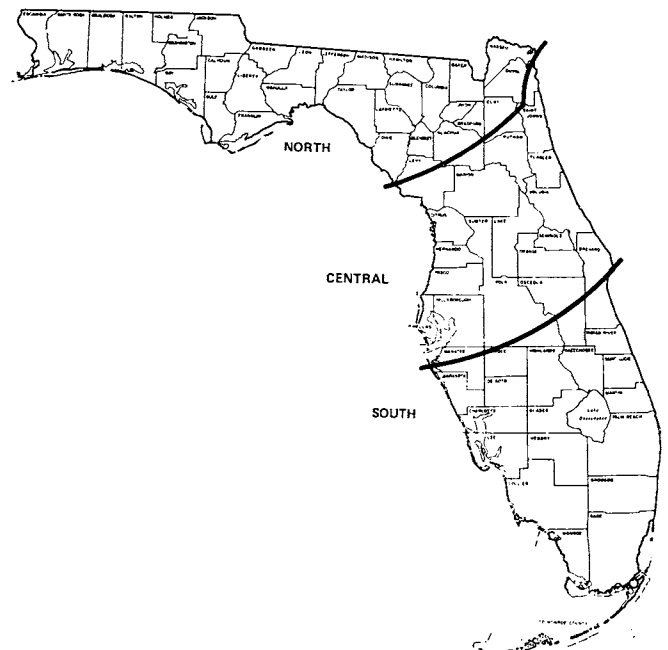


Fig. 1. Climatic zone map of Florida.

The northern and western portions of the state receive damaging temperatures most years and special precautions are necessary for tree survival. This area is roughly north