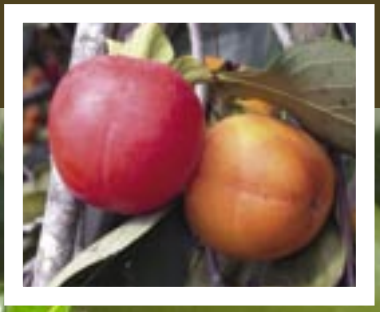
Our Edible Landscape



AgriLIFE EXTENSION
Texas A&M System

Improving Lives. Improving Texas.

Texas AgriLife Extension Service
Galveston County Office
Dickinson, Texas

Our Edible Landscape

by Sam Powers, MG 1987
(Aided and abetted by Ginger Powers)

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Educational programs conducted
by Texas AgriLife Extension Service serve people of all ages regardless
of socioeconomic level, race, color, sex, religion, disability or national origin.

Appreciation is extended to Dr. William M. Johnson,
Texas AgriLife Extension Service Galveston County Office-Horticulture,
for his leadership and his technical advice
and review of this publication.

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PHOTO CREDIT INFORMATION

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Windmill surrounding by tall jujube trees

Preface

BY ALCESTIS 'COOKY' OBERG

A delightful gardening team embraces the new, the rare, and the exotic.

When you go to Sam and Ginger Powers' house in Arcadia Station (beside Santa Fe) Texas, you could literally live off the land. Any season of the year, there's always something delicious to eat in the yard — loquats, blackberries, peaches, pears, figs, persimmons, jujubes, papayas, star fruit, bananas, pomegranates, monstera — and all kinds of citrus.

Sam and Ginger are authorities on rare fruit trees, including jujubes and citrus hybrids. Their greenhouses contain specimen trees not often seen outside the Amazon jungle, and their landscape is full of fruit trees native to faraway lands around the globe.

The Edible Landscape is the record of their hilarious and sometimes misbegotten experiences with growing exotic fruit in their residential landscape. It has been a gardening drama lived out on the coastal plains of Texas for several decades, and is told in their own lively words.

Persimmon tree that grew faster from bare root

The Edible Landscape is an important horticulture book because it preserves the deep experience and wisdom of our local gardening living legends, Sam and Ginger Powers. Sam and Ginger are regarded as treasures among gardeners throughout our region, and receive requests for information and advice from across the world. As a result, preserving their rich experience and broad knowledge will give gardeners an invaluable play book of what can be grown here, how to grow it, what to do, and what to avoid doing.

Many citizens want to turn their yards into "edible landscapes" nowadays. They want to provide their families with healthy, home-grown fruit, free of pesticides and other chemicals. As a result of so many news stories about salmonella and e-coli contamination of store bought produce from abroad, a generation of "locovores" — people who eat only locally grown produce — is arising. Also, gourmets who have traveled widely and crave exotic fruits not usually found in grocery stores would be interested in this publication.

Sam and Ginger Powers are living proof that even an unlikely patch of gumbo ground on the hot, humid, bug and critter infested Upper Gulf Coast of Texas can become a year round cornucopia of fruits from around the world.

The Powers family has deep roots on that parcel of territory whimsically named "Arcadia Station". Sam's family bought this land in Texas in 1895, after reading brochures touting it as a tropical paradise where everything grew. "Pure hype," notes Sam drily. Sam's grandfather did indeed establish a robust citrus orchard, and shipped oranges east by way of the nearby railroad as a commercial venture.

It was not easy. He and his family survived the great and terrible 1900 storm, huddled behind a sand knoll outside their house, because the house was threatening to blow over and collapse upon them. Despite the hard work and bravery, Sam's grandfather's lost his orange orchard to a hard freeze some years later. He truck farmed vegetables after that, and grew more cold hardy fruit trees — pears and figs.

Sam's father was doing dairy farming on the family land when Sam was born there in 1930.

He met his wife Ginger — raised in nearby Freeport, Texas — at a local college, and married her in 1956. They built their house by hand themselves on a 3½ acre parcel of the original Powers land — just in time for Hurricane Carla to hit in 1961. Fortunately, they had built it very well, and it didn't get damage despite Carla's 130 mph winds and torrential rain.

Though they maintained little vegetable gardens over the years and their daughters raised rabbits that they showed at county fairs, Sam didn't take up horticulture or agriculture until after he retired from his job as a lab and instrument technician at Amoco Oil in 1988. Sam's friends — Arnold Lippert and Ted Teddlie — got him involved in the Galveston County Master Gardeners Association, and interested him into growing fruit trees. "What was I going to do in retirement anyway?" Sam says. "I couldn't catch fish!"

Sam and his friends went all over the region, collecting varieties of different fruits as many enthusiasts do — by trading and grafting. Though Sam started some citrus trees from seed, he grafted most of his citrus trees on his grandfather's hearty Trifoliata rootstock.

During the hard freeze of 1989, most of Sam's citrus trees were still in pots, so he dragged them indoors. However, he and Ginger decided it was wise to build two greenhouses to shelter their tropical and citrus collection from another killing freeze like that.

Through their many years of relentless experimentation with all kinds of fruit, they know which are the best performers — and which aren't. They developed their own plum variety, named the Powers Plum, after years of experimenting with plum varieties. They are also often visited by citrus experts intent on grafting and hybridizing some of the rare trees in their greenhouse. Specialty nurseries frequently seek their advice and graftwood from their trees, and experts from afar often trade cuttings and starts of newly discovered varieties with Sam.

As for that 1895 brochure that assured land buyers they could grow anything in Arcadia Station, Texas — well, the kick is, it was right, even prescient. In spite of the gumbo soil, violent hurricanes, hard freezes, severe droughts, voracious insects, hungry critters, and frequent floods, Sam and Ginger really have grown nearly everything in recent decades, and have made their patch of land their own little tropical paradise. Never resting on their laurels, the Powers are always charging off into raising many new exotic fruit — Kwai Muk, Jaboticaba, Grumichama, Strawberry Tree, and Sugar Apple — more often seen in the Brazilian Amazon jungle than in Texas.

But to anyone who questions if something should be grown here or not, Sam's answer is simple: "Why not try?"

Wedding Day - April 7, 1956

The bountiful crop

Sam

Introduction

BY SAM POWERS, MG 1987

"Landscaping that might have gotten out of hand"

This is going to sound odd but I do not consider the hundreds of fruit trees on my property to be an orchard. It is my idea of landscaping — that some people might consider to have gotten out of hand.

How I Got Started

I took the Master Gardener course in 1987 (back in the stone age) and took early retirement in February of 1988. I gave myself a budget of $100 a month to spend. My wife Ginger told me that there was no way I could stay within that budget. I hate to be told I can't do something, but that limited what I could spend.

I couldn't have picked a better time to retire — dumb luck. I met Ted Teddlie at a Galveston County Master Gardener meeting in 1987. He took me under his wing and educated me about growing fruit trees. He was a member of the North American Fruit Explorers (NAFEX), the Southern Fruit Fellowship, the Houston Garden club, the Lake Jackson Men's Garden Club, as well as Harris and Galveston County Master Gardener Associations. He had just started a fruit and nut tree study group that met at Bear Creek Park which I joined.

The Gulf Coast Fruit Study Group

The Gulf Coast Fruit Study Group was organized in 1987 to promote interest in fruit crops for the Gulf Coast area. The concept was promoted by Bill Adams, then the Harris County Extension Agent, Dr. Leon Atlas — a medical doctor who for many years taught an annual lecture series on fruit tree cultivation and grafting techniques at the Houston Arboretum, and Ted Teddlie, who was inspired by his work with the Harris County Master Gardener program. Their goal included the development of a demonstration orchard at the Texas AgriLife Extension Service Center in Bear Creek Park, so that interested homeowners could actually see and taste the results of successful fruit and nut tree planting. The study group would give a quarterly program at the Extension Center attracting both amateur and professional lecturers with special knowledge of fruit crops. They also hosted periodic excursions to local orchards, and distributed a newsletter to those interested in this field of knowledge. Subsequently, plant sales featuring fruit and nut trees were added to the agenda.

At the meetings, I met Dr. Leon Atlas, Dr. Ethan Natelson (a hematologist, and later editor of the group's newsletter), Dr. Bob Randall (later director of Urban Harvest in Houston), and many other fascinating fruit experts too numerous to mention.

The first newsletter was written by Ted Teddlie, starting in 1987. Following Ted's untimely death, Yvonne Gibbs edited the newsletter, and more recently Dr. Ethan Natelson assumed the position.

The Fruit Study Group still periodically meets at the Bear Creek Park AgriLife Center. The demonstration orchard at Bear Creek Park was named after Ted Teddlie.

A Fateful Day

Ted Teddlie called one morning and asked if I would like to go see a commercial tissue culture operation. He lived in Pasadena, Texas, about 30 miles away, and I told him I would be there in an hour. It turned out to be a very significant day for me. On the way to the plant tissue culture place, we made a slight detour and went by the now famous TreeSearch Farms specialty nursery before it officially opened for business. Ted introduced me to the owners, Heidi Sheesley and Bill Rohde. Bill gave us a tour of what they had accomplished, and what they were going to do. Their goal was to provide Houston with hard to get plants and trees, well adapted to the area. Bill especially wanted to push the frontier of fruit tree culture in our region, finding new and wonderful varieties for home growers to try. It was an impressive operation. I had an enduring friendship with Heidi and Bill from then on.

Path to our place

After we left TreeSearch Farms, we made another detour to the Harris County extension office. I was introduced to Bill Adams and Tom LeRoy. Bill Adams was the Harris County horticultural agent, famous for his weekly radio garden talk show. Bill also was the author of many good gardening books. Tom LeRoy was the Montgomery County horticulture agent, also an author of great gardening books including *Growing Fruits and Nuts in the South: The Definitive Guide,* which he coauthored with Bill Adams. They were both dedicated to popularizing the cultivation of home-grown fruits and vegetables in the Houston area.

After a tour of the Harris County gardens and orchards, we took off again. This time, we made it all the way to our destination. I had never seen a tissue culture business before. They had their stock plants in a small area close to the office, where we entered. All the plants were on metal tables with wheels set in tracks, so they could roll them from one end to the other. The left-hand row of tables were for the larger plants being hardened off before they were shipped out. They had a pipe with misters and a roller on each end in a track set up with a timer. Every five minutes or so, a fog started on the far end. It came all the way down past the last table. The misters turned off and the pipe rolled back to the far end.

"Growing Fruits and Nuts in the South: The Definitive List" by Tom LeRoy & Bill Adams

Juju Tree in jumbo soil

That day, they were starting bananas. There was a woman in a little open cubicle, sitting on a stool in front of a vent hood with positive air pressure. She had on a face shield, a lab coat, and gloves with a scalpel. She used a magnifying glass to cut tiny pieces of the banana tree. She placed the tiny pieces in a test tube containing a liquid, and then sealed the test tube. Different plants took different liquid blends. I asked about tissue culturing a plum tree, and was told it would require a minimum order of 1,000 plants plus the cost of developing a protocol for that plant, if there wasn't one already available. It was an interesting place — but it was way out of my league. I wasn't going to grow fruit commercially or on a large scale for sure.

In subsequent weeks and months, Ted and I went to the Lake Jackson Garden Club meetings where I met John Panzarella, a very influential citrus grower and hybridizer, along with many other knowledgeable plant people. It was a pleasure to get to know Dr. Leon Atlas, who has a pear tree variety named after him, The Atlas Orient Pear. I took his course on fruit trees, nut trees, and berries for growing in Zone 9, our interesting climate.

It was an intense education. I met many very knowledgeable and influential people in a very short time. I listened very intently and kept my mouth closed to keep from exposing my ignorance. I remembered that even a fish wouldn't get caught, if it kept its mouth shut.

My Way of Planting Trees

When I started to plant anything, a plant had to meet two criteria: it had to be edible, and it had to be practically maintenance free. If a plant couldn't survive the soil, the heat, the bugs, and the quirky weather on its own, it just died, and I would try something else.

The soil in my yard is heavy black clay "gumbo" that is usually too wet or too dry to work. When it is wet, it sticks to your feet like molasses. When it is dry, it is like a rock. But that was the soil I had and the soil these trees had to deal with. The only plants here that are not planted in gumbo were the roses and the blueberries which were grown in raised beds, and the grapes which were grown in fill sand.

Most of my trees are planted in a small hole just large enough to spread the roots. The hole is back-filled with the same dirt (a method Texas A&M now recommends). After I dig the hole with a shovel, I take a spading fork and dig or tear out another inch completely around the hole. This roughens the edge of the hole and breaks the glaze caused by the shovel when the ground is moist. If the glaze is allowed to remain, it will dry and harden like a container. It would be as if you have planted the tree in a ceramic pot in the ground without drainage, and the roots cannot penetrate the wall.

If the tree or shrub is potted when I buy it, I remove most or all of the dirt in the pot from the roots of the plant before placing the plant in the hole. I use the potting soil from

Persimmon tree grew faster from bare root

the pot as mulch on top of the ground around the plant. There's a good reason for this. I had persimmon trees that were planted with the potting soil dirt attached 10 years ago — and they are just now starting to grow. Two or three trees are six feet tall, the others are not quite so large. On the other hand, my 20 foot tall persimmon trees are only a year older, but were planted bare rooted.

So, planting bare-rooted trees in the ambient soil is the best way to grow fruit trees, with a few exceptions.

Small Spray Rigs

I had said that I was not going to spray the trees. That is not completely true. I learned that when dormant oil was sprayed on while the tree was dormant, it would reduce insect infestations. I occasionally spray streptomycin (Agromycin) on Ginger's favorite pear tree to control fireblight. For years I enjoyed wrapping a kerosene-soaked rag around a long poll and lighting the rag for webworms on fire. It was very satisfying to watch the web go up in flames. This ceased to be an option when the trees became productive, and I had a half a dozen pears or persimmons almost ready to pick inside the web. From then on, I occasionally spray the fall webworm nests with BT when they are on my fruit trees. The BT does a great job on the webworms, but you must get it through both the outer web and inside part too, where the worms are feeding. If you just spray the foliage around the web, you are taking a chance that the BT might be destroyed by the sun or washed off by the rain before the web expands enough to include the sprayed foliage.

I brought a new smaller spray rig a couple years ago. It was similar to what I had before with a bigger pump (60 PSI and 2 GPM). The tank is equipped with a clean-out plug on the end, and I installed an agitator kit to keep the material in the tank mixed. I bought an extra spray gun that I could extend the barrel to 6 feet. I also bought a 50 foot length of 3 /8 inch tubing. We had a trailer with a rusted-out bed, so I cut it down and made the trailer to fit my spray rig. It doesn't look like much, but it cost less than half of what Northern Tools Company wants for their pretty rig without the extra spray gun and hose. With the 6 foot long spray gun and 60 pounds of pressure, I can reach the top of any fruit tree that I have.

We put in an irrigation system for our peach trees, which is discussed in that section.

The two greenhouses we built for our tropical fruits are detailed in that chapter.

With just these few pieces of equipment, simple planting methods, and practical attitudes, we were ready to plant just about everything we wanted without driving ourselves crazy.

Finally, be careful of what you read in books. Tom LeRoy, the Montgomery County Extension Agent, said that if you live south of Interstate 10, ignore anything written by people living north of Interstate 10. He's right. It's better to talk to local gardeners than to follow the advice of television gardeners and northern experts who are aimed at different regions with different growing environments.

General Tips To Watering Fruit Trees
(and what won't work)

- Every tree or bush planted in raised beds needs a lot more water that if it were planted in the ground.
- If using organic mulch, pull the mulch back in several places to be sure the water is getting into the ground and is not being absorbed only by the mulch.
- It's good to use a rod to check how deep the water has soaked into the ground. A ¼ inch deep watering won't help a tree.
- Soak newly planted trees weekly, and water established trees every other week during a drought.
- Watch trees for signs of stress-drooping — wilted or dead leaves. Dig small holes around trees to check for soil that is too wet or too dry.
- Watch for exotic and unusual plants' reaction to watering. We had a paw paw tree that lost many leaves every time we watered it with the irrigation pump. We plugged the water line, and it stopped losing its leaves.
- Soaker hoses don't last long or work well if you have sand or hard water.
- If you're putting in an irrigation system, PVC block valves seize up after exposure to sunlight for a few months. You can't open or close them. PVC gate valve handles disintegrate, too, and you need a pliers to open or close them. Avoid them.
- Don't tell your spouse how to water trees after you finish your Master Gardener course. Everyone has their own method.

Chapter 1

Jujubes

Getting Started with Jujubes

…Produces fruit in 3 to 5 years after planting

…Harvest fruit in August and September

The jujube would have to be my personal favorite fruit. This fruit tree grows wonderfully on the Upper Gulf Coast of Texas, is almost maintenance free, has no disease issues, and produces an abundance of great fruit. I highly recommend growing it to anyone that has some space for a tall tree in their yard.

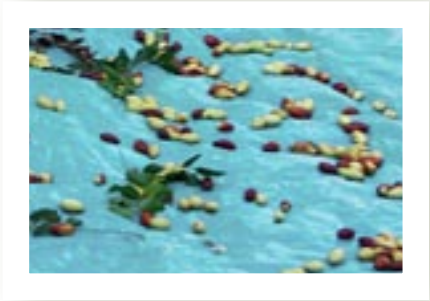
Getting Started With Jujubes

If it is very dry the first year a jujube tree is planted, it may need an occasional watering. After the first year, the tree will survive on five inches of rain a year. It will grow faster if it is watered occasionally during dry spells.

Most varieties of jujubes start producing some fruit within three years of being planted. We have about 30 varieties and about 20 of those have produced some fruit so far. We have not had any disease, fungus, insect, bird, or critter problem. There is a wide variation in taste, production, and appearance among the different varieties.

The two oldest trees are Lang and Sherwood. They are about 25 years old. I weighed the fruit from the Lang for five consecutive years and the lowest production was 100 pounds, the highest about 180 pounds. During the same period of time, the Sherwood had fruit three years, about 20 pounds was the top production, and two years it didn't have any fruit at all.

Lang - the largest jujube



jujube varieties

Havesting Jujubes

I have carried most of the varieties to a taste tasting at Bear Creek Park for the last three or four years and the varieties A&M recommends are way down at the bottom off the list for taste.

The downside to the Jujube's are that they are very thorny. For some reason, the number of thorns in some varieties seemed to decrease as the tree ages.

Most of the jujube rootstock send up lots of suckers, so you could have a thorny thicket in a couple of years if you let them go. But that's a good thing. Roger Meyer, a tropical fruit grower in California, digs up the suckers, tapes a graft on the top, and sells them for $30 for each two foot tall tree, plus shipping and handling. This was the price some years ago.

I bought graft wood from him for two dollars a stick and did my own grafting on the suckers. The trees are not just productive, but are also considered very ornamental for landscaping. For example, the branches of the So jujube are twisted and gnarled, and it is especially showy and sculptural when it loses its leaves.

Tricky Harvest

The fruit should be harvested early in the morning before the dew has had time to dry. The fruit is crisp if harvested early in the morning. If you wait until the afternoon, the fruit becomes pithy and tasteless. The next morning the fruit will become crisp again. The texture of the fruit is improved with an occasional watering of the tree during a long dry spell.

The easiest way to harvest the fruit is to spread a sheet or tarpaulin on the ground and shake the limbs. The fruit does not keep well after harvesting.

About three weeks in the refrigerator is the maximum that I have been able to keep the fruit edible. But it's worth it. The better tasting varieties — So, Sugar Cane, and Chico — are hard to find and expensive to buy.

Our Favorites – Jujubes!

The flavor of the jujube will change from year to year, according to weather conditions. It's best to eat them or use them right away, since the don't keep well.

So and Sugar Cane are the sweetest and always win the taste tests. Ginger's favorite is the So and I like the Chico, which is not as sweet and has a slightly different sweet/tart taste. Lang is the most productive. It tastes like an apple, but we use it in cooking or dry it, rather than eat it fresh.

Chico

Sugar Cane

So

Ant Admire *Sherwood*

Jujube Varieties in order of size and production

LANG: Largest jujube. You must pick it before it is fully ripe to prevent spoilage, so pick slightly green before it turns brown. Best used for cooking and dehydrating. Makes excellent dried fruit, jujube butter, and will substitute for apples in a pie. *Extremely productive*

SILVER HILL: From Bear Creek Park. Same as Lang and may be the same tree.

SIHONG: Large, very good quality, barrel shaped fruit.

SUGAR CANE: Ping pong ball size, dark red-brown when ripe, fruit has very sweet flavor, thorny tree.

SO: Ping pong ball sized fruit, excellent flavor, dark red brown when ripe, attractive tree even without leaves.

SWEET MEATY: Large marble sized fruit, extremely vigorous, productive thorny tree with sweet/tart fruit. *Similar to if not the same fruit as is grown in India*

SHU MIN: Large barrel shaped fruit, sweet with a slight pear flavor. *Fair production*

CHICO (GI 7-62): 2½ inch diameter 1½ inch high, excellent flavor, sweet, juicy, and crisp. Shaped like small a flattened pumpkin, a favorite at the taste tasting. *Very productive*

ANT ADMIRE: Medium sized barrel shaped, sweet flavor.

LI: Large size, fair taste, good for cooking or dehydrating. *Production records incomplete*

TIGER TOOTH: Fruit shaped like a large canine tooth, good fruit, ripens late.

TSAO: The Oriental word for jujube, 1½ inches long and ½ inch diameter, good flavor, ripens to dark color. *Moderate production*

SEPTEMBER LATE: Medium, sweet, barrel shaped.

GI-1183: Medium, sweet, barrel shaped, sweet flavor. *Moderate production*

Tsao *Russian #2*

Siohong *Tiger Tooth Gallery*

GLOBE: Smaller round fruit, sweet flavor.

KOREAN #1: Large fruit, tart taste.
Very productive

HONEY JAR: Small fruit, very good tasting.
Not very productive or healthy

SHERWOOD: Medium large fruit, barrel shaped, below average taste, erect beautiful tree.
Poor production

GA-866: Medium sized fruit, supposed to have 42% sucrose but mine had less sugar than most of the other varieties. Two trees have produced a dozen or so fruit in six years.
Poor production

MU: Old variety from China, 1920 import, new for me.
Production records incomplete

BURMESE SALAY ZEE THEE: Was an evergreen seedling, extremely thorny, reached out and hooked you 3 to 4 feet away, bloomed in the fall, set fruit in the winter, and a light frost caused it to lose its fruit and leaves.
Removed the tree

RUSSIAN #1: Large size, sweet taste.
Production records incomplete

RUSSIAN #2: Medium to small size, sweet.
Production records incomplete

RUSSIAN #3: Large, sweet.
Production records incomplete

RUSSIAN #4: Large, sweet.
Production records incomplete

September Late *Shui Men*

How To Dry Jujubes

from Ginger

Dried jujubes are delicious,
like dried dates and dried figs.

- Pick the jujube fruit in the early morning.
- Wash and remove any stems.
- Discard any with soft spots.
- Place fruit in a large pot, and add water to cover.
- Place a plate on top of the fruit because it will float if you don't.
- Boil until just tender, and remove from heat to cool.
- Pour off liquid and rinse the fruit.
- Seeds can now be removed by using a ⅜ inch metal tube, about 2½ inches long. This instrument has to be home made.
- Push the tube through the stem end. The seed will come out the other end. Then slice the fruit in half or you can also cut the fruit in two, and remove the seed by scooping it out.
- When fruit is properly halved, add ½ cup sugar to a quart of sliced fruit, and a ⅛ teaspoon cinnamon.
- Carefully stir this fruit/sugar/cinnamon mixture, and put it back on the stove on low heat until sugar is melted and covers the fruit. Remove and let cool.
- Place processed fruit on a rack and dehydrate at once in a very low oven or in a dehydrator.
- If you don't have time, refrigerate overnight and dehydrate the next day. The time this drying process will take depends on the size and you variety of the jujubes.
- Do not over dry jujubes. They should be like soft prunes.
- Place in quart plastic bags and freeze. They will keep in the refrigerator a few days, but will mold if left out at room temperature for a long time.
- A treat - Toast a pecan & wrap a jujube around it. YUM!

Grandpa Powers' Trifoliate Orange Tree

Chapter 2

Citrus

Citrus produces fruit in 10 years if grown from seed, two or three years if planted from a pot to the ground, and one to two years from a graft on a mature tree.

Harvest fruit from October to March, depending on the type and variety of citrus.

When I first started playing with fruit and citrus trees in 1988, it was mostly a trial and error experience — with a lot of errors with citrus. My grandfather had a citrus orchard on this property in the early 1900s. There were still a couple of trifoliate orange trees across the fence at the back of our property when I started to grow citruses.

A man in Houston was looking for some rootstock for citrus, so I went to the back and dug up quite a few small trifoliate trees and put them in pots. He came down to pick up the trees and spent a couple hours grafting some citrus trees for me.

They were still in pots and looking good — until the historically-cold freeze of 1989 struck. We moved all the citrus tree pots onto the back porch, and wrapped the porch with plastic. As the temperature kept dropping, we moved the trees indoors, into the den.

We didn't lose any trees. But there wasn't any graft wood to re-graft the trees, if I needed to. So I decided to plant my trees in a greenhouse.

Citrus outgrowing Sam's greenhouse

Enough fruit for several families

Friendly fungus

Mistakes in the Greenhouse

First mistake: The citrus greenhouse we constructed was 15 feet wide x 45 feet long x 12 feet tall. I planted a dozen citrus trees in the greenhouse — each one a different variety — and had plenty room for more. The next mistake I made was to prune off the lower limbs and branches, so I could keep the weeds and grass down. This made the trees grow taller. Three or four of the trees set fruit in one year. It was then I realized just how much fruit all those trees would produce. There was enough fruit for four families from four trees.

The next two years we didn't get any fruit because the trees grew through the roof, and I had to cut them off to get the plastic over the roof. In essence, I was cutting off next year's fruiting wood each year.

To stop the cycle, I cut the top half of the trees off. This was a little stressful. A couple of the trees died and couple more had a hard time recovering. I had a pretty fair crop afterward, and a bumper crop a year after that.

Since the radical pruning, I have been pulling the longer limbs back inside the greenhouse, and cutting off a portion of them each year. As the trees have increased in diameter the area has became crowded. This crowding increases the problem with white fly and sooty mold since I have very little air movement through the trees.

A Great Discovery – a friendly fungus

One cool discovery we did make was finding a beneficial citrus fungus. We were trying to clean up the yard for a tour and talking about how bad the citrus looked with all of the sooty mold on the leaves. The mold grows on the excretions from the white fly — a small white fly that looks like dandruff when you shake a limb and lays its eggs on the underneath side of the citrus leaves. We looked underneath the leaves and found this red looking scale with white rings around them. This was something we had never seen or heard off and didn't know what to do to get rid of the scale. We discovered this was a predatory fungus and comes in yellow, orange red, and brown. The fungus attacks white flies during their nymphal stage. Some mites feed on the fungus and help spread it from one plant to another. We left the fungus alone, and by the time the tour took place the white flies were eliminated. With no new food coming in the sooty mold died and the rain washed the leaves clean. Patience is a virtue that is sometimes rewarded.

If I Had It To Do Over Again

If I were to start over, I would probably plant citrus trees on flying dragon rootstock — a dwarfing version of trifoliate orange. I would grow them in 10 to 20 gallon pots and be more selective in the citrus I grew. After having insured the probability of some citrus every year from the potted plants and a supply of scion wood in case of a hard freeze, I would plant the other citrus out in the yard or in the orchard.

Citrus growing from seed

Selecting Your Favorite Citrus Varieties

Every fall, John Panzarella, a citrus specialist in Lake Jackson, Texas, has a citrus tasting with from 40 to 80 different varieties. Also, there has been a Galveston County citrus show for the last decade at the Walter Hall Pavilion in League City, Texas. The show is open to anyone including people in the surrounding counties. We usually have two to three dozen varieties of citrus entered in the show, and most exhibitors will give you a taste after the show is over. That's the best way to find out what you like.

Most citrus will come true from seed, but some take several years to become full trees. For instance, it will take a grapefruit eight to ten years before it will produce fruit from a seed. This can be reduced to four or five years by grafting a piece of the original tree onto the seedling. Another advantage to this method is that if the tree freezes back to the ground, it will come back true to the parent — and if it has a large root system, it will be a productive tree in a very short period of time.

Citrus growing from grafts

Cold Tolerance Varies

There are too many variables to give a specific cold-tolerant temperatures for citrus. Generally, kumquats are the most cold hearty citrus trees, and will tolerate temperatures down to 20º Fahrenheit or so. Most satsumas will survive to around 25º Fahrenheit, grapefruit to around 28º Fahrenheit, lemons to 29º Fahrenheit or so, and key limes only to 32º Fahrenheit.

A couple years ago, we had a cold spell where the temperature was a little below our normal low temperature – down to around 28 or maybe 25º Fahrenheit. Both of my lemonquats lost all their leaves and our Bloomsweet grapefruit trees lost a lot of their upper leaves. None of them set fruit the following summer. The kumquats, Ujukitsu lemon, Chandler pummelo, a pummelo seedling, Moro blood orange, Pineapple orange, and a number of different

Changsha mandarin

satsumas and mandarins showed no ill effects. I was surprised at the lemonquat damage, since these are supposed to be kumquat hybrids, and therefore, more cold hearty.

The Changsha

Then there is my Changsha mandarin. I was given a Changsha seedling about 15 years ago. I was told it was an old variety, cold hearty with a lot of seeds. I found reference that said it was cold hearty to 5º Fahrenheit — quite remarkable for any citrus.

I hope I said thank you, but I didn't really have any desire to grow an old variety of satsuma with a lot of seeds — even if it was cold hearty. I stuck it out back in an empty area between the blackberries and peaches on flat ground.

The tree might have been watered as much as twice a year, and took four or five years to grow above the grass and weeds. It took a few more years before it produced any fruit.

But I loved the taste! Now, I will pick one whenever I walk by the tree, drop the skin on the ground, and spit out the seeds.

The only downside with the Changsha mandarin is its tendency to alternate-year bearing. But its extreme toughness make it my kind of citrus tree.

Our Favorites

Among the bewildering number of varieties we've raised and tested, we have some favorite citruses. First there is the Changsha mandarin. Then there is the Golden grapefruits a wonderfully-flavored grapefruit for eating and juicing; it has an orange interior, and must be a cross to an orange or tangerine. Ginger likes the Bloomsweet grapefruit too, thought it is cold sensitive. The rare Ujukitsu lemon, sometimes called the "Lemonade Lemon", can be peeled and eaten like a tangerine; it has no sourness — just a delicate, sweet lemony flavor. The Improved Meyer lemon is the best lemon for cooking and juicing, and is a great, carefree tree. Meiwa kumquats are extremely cold hearty, are wonderful for eating fresh and can also be made into great preserves and marmalades. We also enjoy mandarin oranges even more than the satsumas — especially the Fairchild mandarin which makes terrific juice which holds its flavor in freezing. Many citruses get a strange aftertaste when frozen but not the Fairchild mandarin. We also like the seedy but flavorful Pong Koa mandarin.

Citrus Varieties

Meiwa kumquat

Bloomsweet grapefruit

Improved Meyer lemon

Mexican thornless lime

Republic of Texas orange

Ujukitsu lemon

Fairchild mandarin

Gallery of Citrus to enjoy for their beauty on the tree and in the mouth!

Buddha's hand

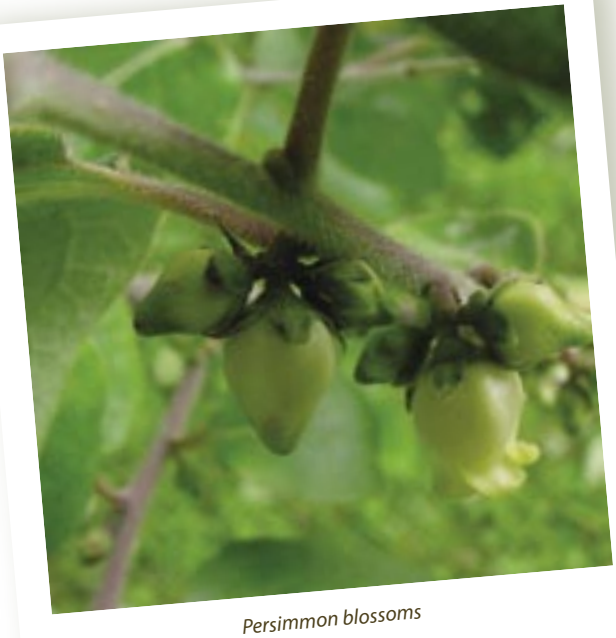
Ambersweet orange

Citrus Tips

from Sam and Ginger

- Be careful how you prune citrus trees. It's a mistake to prune off the bottom branches. Prune tops carefully to maintain a reasonable height only. Citrus fruit grows on last year's wood, so you can lose your fruit production when you prune — and if you're not careful, you can kill the tree too.
- Get a hearty rootstock, like Trifoliata. Flying Dragon is good too, but you don't need it on trees that naturally dwarf, like kumquats.
- Plant citrus trees in the ground, don't keep them in pots. Locate them in a sunny sheltered area, like the south side of a house whenever possible.
- When planting, make the hole one inch larger than root ball, and break up the soil on the side of the hole with a spading fork — so the soil doesn't form an underground container.
- It's not necessary to place citrus in a raised bed, if water doesn't stand in the area for more than 24 hours after a rain.
- Don't put your watering system too close to the trunk of a citrus tree. If it's a drip or spray system, locate it three feet away from the trunk. The trunk will rot out from watering, and you can get soil diseases too.
- You can spray ultra fine oil to control diseases but do not use regular dormant spray on citrus in the summer above ¼th strength.
- Pick the fruit off a newly-planted tree for the first couple years. The fruit won't be good quality in the first year, and it will slow down the establishment of the tree.
- Don't mulch citrus trees. Mulch attracts critters and diseases, and heavy mulching will prevent water from soaking down to the tree roots.
- Let St. Augustine grass grow around the base of the tree — but not Bermuda nor native grasses. It'll help hold moisture in, and will keep soil intact during droughts — reducing soil cracking and preventing the drying out of the roots.

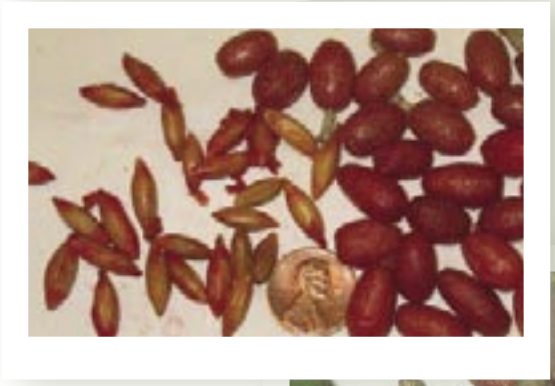
Chapter 3

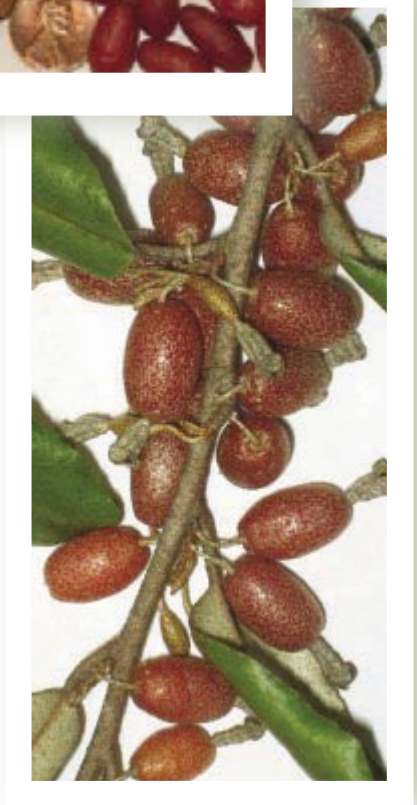


Persimmon blossoms

More Wonderful and Unusual Fruit

It is amazing what unusual fruit you can grow in our region. Persimmons, pomegranates, and loquats grow wonderfully in our area, and are almost maintenance free. Other fruit — like avocados, pawpaws, and mayhaws will do tolerably well with some care and attention. To purchase these unusual fruit tree, you may have to go to the various Master Gardener fruit tree sales in January, February, and March, or find a specialty nursery that will carry or order them from wholesale nurseries like TreeSearch Farms in Houston.





Elaeagnus Multiflora or Goumi

…Produces fruit within 2 to 3 years of planting

…Harvest in the spring when fruit is ripe

Elaeagnus is a large, dense, evergreen shrub. The top of the leaves are shiny green with the underneath side being silver with gold flecks. This shrub blooms in the fall with tiny inconspicuous fragrant flowers that smell like cinnamon. You can smell the tree 30 feet away. In the spring, the tree has bright red, golden flecked fruit about the size of jelly beans. The fruits hang down like Christmas tree ornaments, and don't grow in clusters.

The fruit are each about ¾ inch long and ¼ inch wide with a big center seed. It is bright red when ripe, and has a flavor somewhere between a cranberry and a tart blueberry.

I made a batch of wine from the fruit one year. We were tasting it to see how much sugar to add to make a sweet wine. I took a very tiny sip and felt my toes tingle. This was a new experience for me. I came in the house and started checking to see what I had done to cause such a sensation. After going over my notes and doing some calculations I realized that I had made 40 proof wine. I had added too much sugar and the yeast had converted it all into alcohol. Most yeast stops fermenting at 34 to 36 proof but not this time.

Feijoa
or Pineapple Guava

…Produces fruit within 4 to 5 years from seed

…Produces fruit within 2 years from plant in a 5 gallon pot

…Harvest fruit in the fall

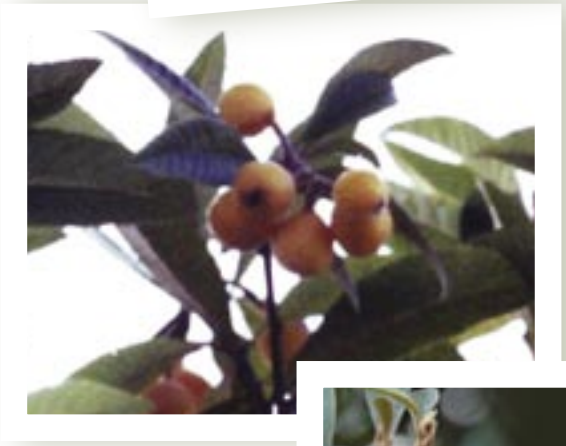
Pineapple guava is probably the easiest and most care-free fruit and ornamental tree that you can grow. It's a large evergreen shrub, but can be trained into a tree. It has beautiful edible flowers in the spring, and a fruit that is similar to a kiwi in the fall.

The petals of the flower are edible fresh, in a salad, or in other dishes. The fruit is ripe when it falls from the tree. You don't even have to make a decision as to when to pick the fruit.

It tastes somewhat like a kiwi, but is not juicy like a kiwi.

The named varieties of feijoa cost upwards from $35. But the feijoas sold as ornamental plants in nurseries go for about $10, and the fruit from them is almost as large and tasty.

The downside to the feijoa is that they will freeze to the ground at about 10º Fahrenheit. Our tree froze to the ground in 1989. But it regrew, and three years later was six feet tall, six feet in diameter, and full of fruit.



Loquat

…Produces fruit from seed in 3 to 5 years

…Harvest fruit in early spring

A loquat is a small evergreen tree has large fuzzy tropical-looking leaves. It blooms in the late fall with fragrant flowers, grows the fruit in the winter, and ripens the fruit in the early spring.

There are named varieties that can be ordered for a price. But you can plant a seed from a loquat you like, and in three to five years, it should start fruiting.

There is a wide variation in flavor and sweetness among the loquat varieties. Some loquats are yellow on the inside, some are white on the inside, some are tart, other have a peach/apricot flavor and are very sweet.

Ripening dates can vary between trees too, from March through May.

Our method of cultivating loquats was simple. We tasted fruit from a number of different trees, saved the seeds of the ones we liked, and planted them. We also planted a couple seeds from hardy trees with less desirable tasting fruit to use for rootstock, and to graft on the best tasting varieties. Well, that was the plan. I didn't do any grafting, but by tasting the fruit from different trees, you can tell the difference.

The downside to raising loquats is that if there is a light freeze when the tree is in bloom, it will wipe out your crop for the year. However, if the fruit has hung on the tree for awhile and attained a little size, the fruit can withstand 25º Fahrenheit for a short while without damage.

The loquat tree itself is hardy, and can withstand 10 to 15º Fahrenheit.

The major problem I have encountered is that loquat trees are susceptible to fireblight. I have cut out some major branches on small trees to stop it, and it did not seem to bother the tree as to production or vigor.

Mayhaw

…Produces fruit in 5 to 7 years

…Harvest usually in April

Without getting into technical terminology, the mayhaw belongs to the hawthorn family. Hawthorns grow all around the world north of the equator. There are over 800 varieties growing in the United States, and 16 varieties growing in China. Several of the Chinese varieties have been imported into the United States. The imported varieties are similar to the mayhaw with a couple of exceptions: the Chinese varieties' fruit ripens in the fall, and is two to three times the size of the native varieties which ripen in the spring and are small. The Chinese trees were imported with the idea of having a spring and fall money crop. I have two varieties of Chinese hawthorn in the same row where I killed some native mayhaw trees. The Chinese varieties seem to be more hardy from my limited experience.

Mayhaw Varieties

There are two basic mayhaw genuses. One has a small, round, red fruit, and the other has a small, round, yellow fruit. Both varieties of fruit are ½ to ¾ inches in diameter. Technically the fruit is edible raw, but I haven't seen anyone eat mayhaw fruit fresh. The inside of the fruit is nearly all seeds and very tart to the taste. Mayhaw fruit is almost always used to make a delicate-flavored pink jelly.

Both mayhaw varieties ripen in April and the first of May. There are hundreds of thousands of acres of mayhaws growing in East Texas, Louisiana, Southern Arkansas, and Mississippi — in the swamps and wet river bottoms where it is too wet for anything else to grow.

If you have been looking at catalogues and in nurseries for mayhaw trees, you probably found trees with names like Mason Super Berry, Big Red, Super Spur, Heavy, T.0. Superberry Producer, and dozens more. These trees were all found growing in the wild. Someone found the tree in the spring with fruit on it, and thought the tree had something to offer — bigger berries, heavier fruit-load, no rust disease or some other improvement over the mayhaw trees they had seen before. They would tag the tree, write down the location, come back in the winter, and cut graft-wood for propagation. Then they would name the tree.

Uses

The fruit makes some of the world's best jelly — pink, sweet, and lightly flavored. I have made some great-tasting wine from mayhaw fruit too.

Some of the people in East Texas and Louisiana dry the leaves and make a tea from them. I didn't think it had a great taste — but then, I do not like spiced tea. Anyone who likes spiced tea might find mayhaw tea enjoyable.

Mayhaw fruit is supposed to be good for your heart and circulatory system. A few years ago they were doing research with some of the chemical compounds in the leaves and branches of the tree for cancer treatment.

There are a number of people in East Texas and Louisiana that are trying to establish mayhaws as a commercial fruit, and to start a processing plant in central Louisiana to make jelly. They had representatives traveling all over the country trying to buy mayhaws in large quantities. I haven't heard an update in the last few years.

My Mayhaw Experience

Before they started trying to grow mayhaws on a commercial bases, everyone thought that they preferred wet, swampy growing conditions. It was found that they prefer a well-drained sandy loam soil with an occasional irrigation during a drought. The trees grew in the wet swampy conditions because the one thing they could not stand was competition from other trees. I killed a dozen or so trees (seedlings) before I found this out. I had what I thought was a perfect place for mayhaws — too low and too wet for anything else to grow except weeds and grass. But it wasn't a good place. Ten out of 15 plants died the first year.

Later, I went to Bridge City for a couple of gallons of mayhaws to make some wine and told my friend about killing the trees he had given me. That's when I found out they couldn't stand the competition. As long as one leaf is above the water level the tree won't drown, but grass and weeds around the base will severely retard the growth. Competition from any other tree roots will also kill a mayhaw tree.

It turns out that cypress tree roots got my mayhaws. Chinese tallow trees, an invasive species of trees in our area, were killing thousands of acres of mayhaw trees a year in East Texas. This is very upsetting to the people making $500 a day gathering mayhaws from the wild.

A mayhaw tree would make a small attractive landscape tree. But due to the competition the roots will have with other trees growing in your yard or your neighbor's yard, I suggest you find a small hawthorn tree to plant, then graft the mayhaw on top of the hawthorn. If you can't find hawthorn rootstock, then go-ahead and plant a mayhaw tree. I would just try to plant it as far away from other trees as possible.

Mayhaw Advice

If you're interested in growing mayhaw fruit, I would buy a tree grown from seed rather than a grafted tree. The seedling will cost a lot less, and I don't know if anyone that has planted enough mayhaw varieties to make an intelligent choice about which one would do best in this area or in someone's specific yard. The named variety you will find at nurseries might have been selected in northern Louisiana or Southern Arkansas, a different climate and soil condition from those of the Upper Gulf Coast of Texas.

The major problem with growing mayhaws seems to be rust on the fruit. A number of trees have been selected in the wild for their rust resistance, but when put in a commercial orchard they were no more rust-resistant than the other trees. I don't know what kind of rust gets on the mayhaw fruit. I have heard it called apple rust, cedar rust (from cedar trees), and mayhaw rust. They may all three be the same thing. The infected fruit will have little bumps — the size of an old straight pin head or smaller, and will be light brown or tan in color. The fruit can have from one or two bumps to many bumps, covering the whole fruit and ruining the fruit. A few years ago the growers used Maneb or Zineb to control rust. Both products may be pulled from the market or are on restricted use now.

Three or four years ago, the growers were trying to get the mayhaw included as an apple for EPA pesticide purposes. I haven't heard whether they have succeeded or not, but no chemical company is going to spend $20 million or more to get a product approved for use on mayhaws alone.

Pawpaw

…Produces fruit in 5 to 6 years, but must have two different varieties

…Must hand-pollinate when in blooms in late spring

…Harvest fruit in late summer

Pawpaws are the only truly native North American fruit. We on the Upper Gulf Coast of Texas live a few hundred miles too far south to grow them with ease. They like sandy soil, lots of water, and shade for the first few years of their life. However, pawpaws dislike overwatering. We had a pawpaw that lost leaves every time we watered it with the irrigation pump. When we plugged the line, it stopped losing leaves and got healthy again.

Pawpaws are extremely hard to transplant. I had one success out of seven attempts.

My success was a 5 inch tall seedling that I paid five dollars for about 12 years ago. I ran across a pawpaw growers' website that said never transplant a pawpaw while it is dormant or not actively growing. The best I remember, it had something to do with fungus in the soil destroying the roots before they could get established enough to protect themselves.

Pawpaws require cross-pollination from another pawpaw tree — and a sucker coming up five feet away does not constitute another pawpaw tree. The beetle that pollinates the pawpaws in Ohio, Kentucky, and Tennessee is not present in our part of Texas. The blow fly or bottle fly will pollinate pawpaws, but you need something stinky to attract them, like rotting meat.

The best way to pollinate pawpaws is by hand. The flower opens in the morning as a female, and in late afternoon and the next morning produces male pollen. This male pollen can be collected and used on the female flowers of another tree. The pollen can be gathered on a small soft brush, and put in a small jar with a lid or in a gel cap. The pollen can also be stored in the refrigerator for several weeks.

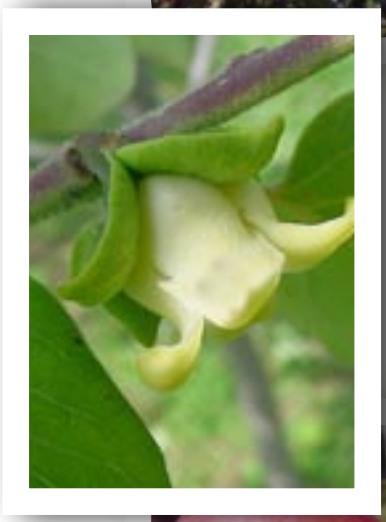
A few years ago, I thought I had found the ideal pawpaw tree for this area. It had survived for about 12 years without any problems with the droughts and with the flooded ditches backing up covering the ground with water for many hours. Nothing seemed to bother this tree. The tree had also shot up along with three suckers that were almost as tall as the original tree. A couple gardeners had provided me with pawpaw pollen from their trees, so I had a small crop of pawpaw fruit for the first time. I also had four or five grafts of different varieties growing on the suckers for future cross-pollination.

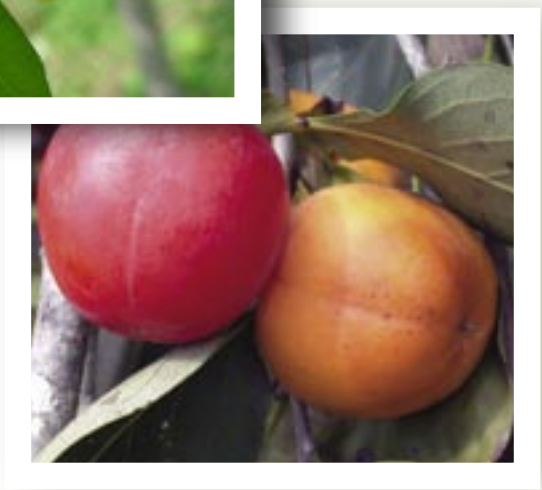
The fruit weighed four ounces each, with the skin and seeds making up one-half-ounce of that. They tasted like banana custard.

However, Mother Nature threw me a curve one spring and early summer. We had an extremely wet spring and early summer, and the water in my ditch came out of its banks a half a dozen times. Then we didn't get any rain for four months. This was extremely stressful on the tree. I had a lot of the die-back off the limbs and lost all of my grafts. It is back to the drawing board while I watch the trees struggling to recover.

One nurseryman in Kentucky recommends occasionally using a can of cheap stale beer to five gallons of water for pawpaw transplants. It might be worth trying.

Pawpaw fruit





Persimmon

…Produces fruit in 3 to 5 years after planting

…Harvest fruit in fall through early winter, depending on variety

The oriental name for persimmons means "*Fruit of the Gods*", and a lot of people would agree with them — unless they tried an astringent variety that was not ripe and would think it was the "*Fruit of the Devil*".

It is impossible for me to describe the taste and texture of the oriental persimmon since there are two distinct classes of persimmons, astringent and non astringent. These classes are further broken down into two classes, pollination-variable and non-variable. Some have a mushy, custard texture when ripe while others are crisper. Some have a mild sweet, mango-ish flavor, while others are tart.

Persimmon trees usually leaf out, then flower in the spring. They will set and ripen fruit without the flower being pollinated. Some varieties of persimmon trees have a large number of male flowers, some varieties have no male flowers, and the rest are in between. The pollination-variable type changes the taste and astringency of the fruit. Also, if the flower is pollinated, the fruit will have seeds. But the non-variable types' only change will be to produce seeds if they are pollinated.

Some persimmons are harvested after the tree has lost all its leaves in the fall. The fruit continues to ripen, as it hangs there like an ornament.

A Slow Start

When I first retired and started planting trees, Ginger pretty well ignored me, except to say that I could not plant a persimmon tree on our property. I went to a seminar on fruit trees and won a Fuyu persimmon as a door prize. Since it was such a little thing and I had won it, she reluctantly let me plant it. The next year I went to a meeting and purchased another one for two dollars — there had been a mix-up and plants had been left over.

After a couple of years, we had our first persimmon crop of a half-dozen non-astringent Fuyus. These were the first non-astringent persimmons we had ever tasted — and we both fell in love with them. After that, I planted some different non-astringent varieties and snuck in a few astringent ones too. Ginger's mother loved the astringent varieties, so I got away with growing those. But I personally couldn't stand the texture of the fruit which was very mushy. After having tasted them for several years, I have developed a liking for a few varieties, and Ginger has found some acceptable ones too.

Growing Persimmons

Persimmon trees are extremely hardy and difficult to kill. Persimmons prefer a well-drained, slightly acidic, fertile soil but will grow in almost any soil, including poorly drained gumbo. Some varieties of persimmon trees are naturally small (10 to 12 feet tall), while others can be kept small by pruning. They have very few insect or fungus problems. Birds will eat the non-astringent varieties, but they prefer the astringent varieties. You may have to use bird netting to assure yourself of a fruit harvest. The netting has to be completely closed and without any holes. Otherwise, the birds will find the opening and go inside. I had a piece of netting with a 4 inch diameter hole that I had folded the netting over to cover it up. But the wind caught the netting overnight and uncovered the hole. I walked by the tree about 8 am, and three mocking birds were merrily eat away at my persimmons. Squirrels and other critters will eat some of the astringent varieties too, but they dearly love non-astringent varieties. They will eat through the bird netting to get to the fruit. Ideally, it would be best to taste the fruit before planting the tree, especially if you have limited space.

If you have a persimmon tree in your yard that has fruit that you do not like, it can always be "top-worked" — grafted with individual limbs of desirable varieties — like a pecan or pear tree. The tree will look strange for a year or two, like it has been in a serious car accident and has bandages all over. But in the end, you will have the varieties you want rather than the one you don't want.

However, if a persimmon dies back to the ground, it's a waste of time trying to re-graft the suckers coming up from the roots. Just start over with a new plant.

Persimmon Varieties

All the non-astringent varieties that I have tasted have enough similarity that if you find one you love you will probably enjoy the other non-astringent varieties. In my opinion, there is a wider variation in flavor among the astringent varieties. We have three or four astringent varieties that are extremely good, and three or four that are completely insipid — and some varieties in between, take them or leave them.

If you have an astringent persimmon that you don't like or it produces way too many fruit to use, there are a couple solutions to your problem. Wait until their fruit has turned the color it will be when ripe but before it starts getting soft. Then you can pick the fruit, peel and slice them into ⅛ inch to ¼ inch thick sections, and dehydrate them. This will remove the astringency and make a wonderful snack.

You can also remove the astringency of persimmons by picking them after they have colored up. Then eliminate any that have a soft spot, place the persimmons in a plastic or stainless steel bucket, and cover them with water. Place a weight on top of the persimmons to keep them submerged. Change the water every day. On the fifth day, the persimmons will have lost their astringency.

The Fuyu persimmon is a great tasting non-astringent variety, but I have managed to kill two large Fuyu trees plus several graphs on other trees. I acquired a piece of Makawa Jiro scion wood from Mississippi a few years ago, and the tree has started bearing. The fruit tastes almost as good as the Fuyu, is almost twice the size, and so far the tree seems to be a lot healthier.

Bird netting … but not squirrel netting!

Our Favorite Varieties

The best persimmon is the Makawa Jiro. It is large, tastes great, and is a healthy productive tree. The Masimoto and Giombi are good too. My favorite astringent variety is the Honan Red. It is small, red, and tastes like a wild persimmon. It will dry on the tree and become very sweet.

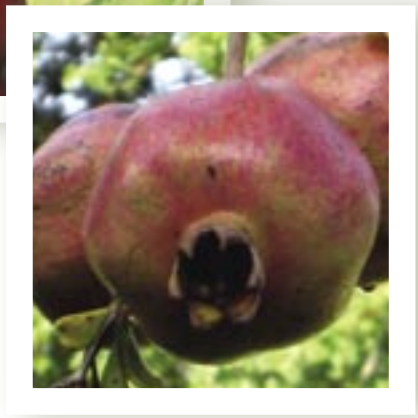
Many people also like the flavor of the Fuyu and are willing to put up with its problems. One friend recommended the Suruga non-astringent persimmon, a favorite in Japan. It is medium-sized, orange, has a mango-like flavor, and can be eaten while still firm and crisp.

WARNING: DON'T EAT PERSIMMONS SKINS!

Stomach acid will not dissolve the skin of a persimmon. So the skin that goes in one end of the body must come out the other end in the same condition. A number of people have had emergency surgery to remove blockage in the intestines caused by eating persimmon skins.

A man who grew up in Israel came by to look our jujube trees and saw our persimmon trees with fruit on them. He said he had three friends who had to have emergency surgery from eating persimmons, and he was not about to eat one. He had never heard the skins were not digestible.

I was reminded of this recently, when an e-mail came from a woman whose horse had gotten into her persimmon orchard. She had to have a veterinarian open the horse up and remove the intestinal blockage.



Pomegranate

…Produces fruit 3 to 5 years from planting

…Harvest fruit in August

Pomegranates are another very low maintenance tree or shrub that has edible fruit. They produce a really beautiful flower in the early spring and make a great ornamental bush in the landscape.

There are a number of named varieties available, Wonderful being the most available. Except for being a pretty ornamental, the only thing wonderful about Wonderful is the name. Wonderful's fruits are among the largest pomegranates you will find. But it cracks open and spoils before it ripens in our region. There are also many ornamental pomegranates available that do not develop fruit from the blooms at all. They're just pretty in the landscape, when they bloom.

We had five or six varieties of pomegranates plus three Russian varieties. I lost their names. The Russian varieties seem to be little more tart.

Pomegranates are fairly easy to grow from cuttings. The best way to propagate pomegranates, though, is to pry loose a sucker with some roots on it with a hammer and chisel. This sucker with roots will grow quickly into a productive tree.

Since pomegranates were widely available in local nurseries, I have purchased both cuttings and plants over the years. I collected them for their ornamental value since they met the requirement of easy care and edibility — but I didn't care to eat them for many years.

However, Ginger bought a juicer one year, and made juice from our pomegranates. The pomegranate juice tasted great. I guess I will have to water them a little more often.

Most pomegranates have some thorns, but they are usually not too bad. Since pomegranates fruit on new wood, it won't hurt to prune out the old unproductive wood to maintain or reshape the tree.

Quince

…Produces fruit in 5 to 7 years, when it's about 10 to 12 feet tall

…Harvest fruit in July or August depending on the variety

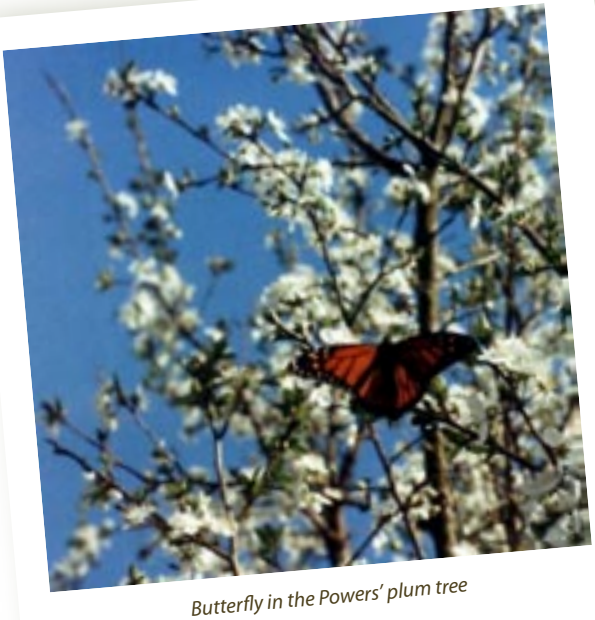
We have one pineapple quince in the front yard that I planted 10 years ago. It has never been sprayed, fertilized, pruned, nor has the fruit been picked. Ginger watered it one time last year. Every year it will produce a dozen or so fruit which we never pick.

The fruit ripens about the same time as the pears and jujubes — mid to late summer. The fruit is highly astringent unless soft and ripe, and has to be completely ripe before it is cooked or made into jelly. The flavor is like that of a tart apple, and Middle Easterners use it in compotes.

The flowers of the quince tree are beautiful, large, delicate, five petals, pale pink — but sometimes go unnoticed among the other flowering plants.

Chapter 4

Common Fruit



Butterfly in the Powers' plum tree

Even though we have a yard and greenhouse full of exotic fruit, we also have a number of the ordinary fruit trees that you'd find in many backyards: pears, figs, lemons, plums, peaches, and apples. But there are some problems growing these common fruits here. The grocery store pears that grow well in California or Washington State do poorly here because our winters are a great deal warmer than those places. Citruses and figs that do well in California or Florida don't necessarily do well on the Upper Gulf Coast of Texas. I've given advice on the varieties of these fruits you should look for so you don't waste the next five or ten years cultivating something like the Bartlett pear, only to learn it will never ever bear fruit here.

Apple

…Produces fruit in 8 to 10 years from planting;

…Produces fruit in dwarf varieties can produce in 2 to 3 years

…Harvest in June and July, depending on variety

Some of the low chill apples like Anna and Golden Dorsett can be grown successfully here. There may be others low chill varieties now, but the ones I have tried have all died too soon to tell what they could do.

Rootstock Issues

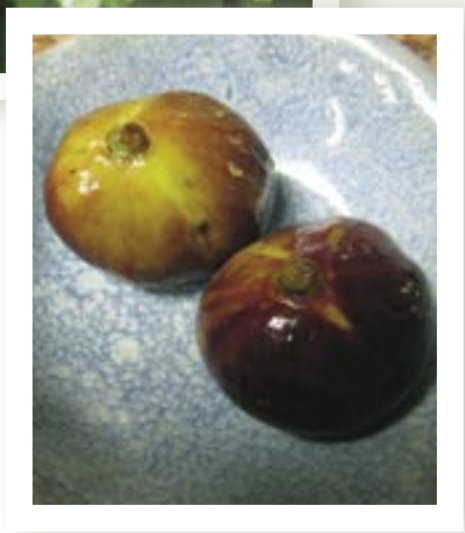
All the apples I have purchased have been on Mark rootstock. Most have lasted only two or three years before they died, and the rest are trying to die. I have one Golden Dorsett on M26 rootstock in the same row and with the same care, as the 15 dead trees on Mark. It has produced a large number of apples for the neighbor's cow and for the wildlife for each of the past eight years. I have had a hard time finding more M26 trees to experiment with.

All the old literature I have found says that M26 rootstock won't work here. However, there is a new rootstock release due out soon that eliminates some of M26 problems. In the meantime, I am trying a few M111s which is only about 25 percent dwarfing. Three of the four trees I purchased are still alive and seem healthy, but are not growing well. If I can find a dwarfing rootstock that will grow in gumbo, I could use it to grow apples. With an inter-stem, I could also dwarf pear trees to take up less space and start producing earlier.

What To Do

If you have gumbo soil and really want to grow apples, I suggest a raised bed with good soil and a more dwarfing rootstock than Mark. Trees on dwarfing rootstock, that grow from 5 to 10 feet tall, will need to be supported throughout their lifetime. The support can be provided by a steel post or by guy wires like a radio tower. You can also espalier apple trees on wire or against a fence to take up less space. As long as you only have two or three trees, spray with dormant oil in the winter, and keep the leaves raked up and disposed of.

If you don't mind a blemish or two on the fruit, you should be able to grow apples with very little or no spraying with an insecticide or fungicide.



Fig

…Produces fruit in 1 to 2 years from planting

…Harvest from mid June to mid August at daybreak, before the birds wake up

We have several varieties of figs. About half of them are unknown varieties. We pick and eat a few as we walk by the trees and the birds eat the rest. They are very easy to grow.

Figs need a lot of water and should be mulched heavily to preserve moisture during droughts. Nematodes can be a serious problem if you have light sandy soil, since figs are their favorite food. I read an article by a man that had trouble growing figs because of nematodes. Nematodes only live in the top two or three inches of soil, so he dug a hole the depth of the pot the tree was in, then he cut the bottom and a few inches of the side off the pot. He planted the fig tree in the hole, leaving the top eight inches of the pot intact, thus protecting the tree from the surrounding soil. The fig trees were still doing fine after four or five years.

Another option would be to plant an LSU Purple, a variety of fig which is nematode resistant. One can then graft or bud desirable varieties onto the LSU Purple rootstock.

Figs can easily be propagated by cutting of a branch, dipping the cut-end in some rooting powder, and sticking it in the ground or in a pot. It will need to be well watered until it becomes established.

Fig Varieties

Figs come in both closed-eye and open-eyed varieties — meaning the little opening in the bottom of the fig fruit either opens like a flower or stays closed with a drop of nectar. I would recommend that you plant a variety with a closed eye. Otherwise the fruit beetle or rain can get in eye and sour the fruit.

The Blackjack fig tree is very unusual. Instead of bushing out from the bottom up like most fig trees, it shot straight up 10 feet high, established its vegetation at the top like a palm tree, and then sent out straight branches from the top down. The tree produces a good yield of medium large, closed-eye, dark brown figs. The inside of the figs are honey-colored and taste very good.

The old Celeste or “Sugar Fig” is the variety favored by most gardeners in our region. It produces abundant small tan or brown figs, are very sweet, and closed eye. The trees themselves are bushy, carefree, and bug resistant. The skins on the Celeste figs are very thin, easily damaged, and the fig itself is highly perishable. If we get a torrential rain, these figs will get waterlogged and will sour on the tree. But they are very productive, delicious tasting, and good for both eating and cooking.

The Green Ischia we have has pretty good taste and is medium-sized, but it is not extremely productive. It has a slightly pale green color and a bright red interior. When this green fruit ripens and gets softer to the touch, the birds supposedly won't bother the fruit. But we have more intelligent birds than most people or our birds have better color perception, because they do a good job of finding the ripe fruit and consuming it.

The LSU Purple produces medium-sized dark purple figs over an extended period of time. But the taste varies from good to tasteless. LSU Purples will produce sweeter figs in cooler wetter years. In dry hot years, which we have quite often, these figs are not as sweet and tasty.

We have a Texas Everbearing but is likely something else — maybe a Brown Turkey. It is large dark fig and with a slightly open eye. It very seldom ripens enough fruit at one time to make preserves, but produces enough fruit to eat a couple of fresh figs each day from the middle of summer until frost.

Some nurseries sold Celestes as Texas Everbearing also, so there's some confusion about the names of some figs, even in the horticulture literature.

A bowl of fresh figs

Our Favorites

Everyone has a favorite fig. Ginger likes the flavor of the Blackjack best, and we both like LSU Purple when it's moist. Texas Everbearing is also good.

Most people in the region favor the Celeste "Sugar" fig for its very sweet flavor, versatility in cooking, and high productivity. Our Master Gardener friends have grown Banana figs — an excellent and delicious fig discovered many years ago by Mr. Hester, an old nurseryman in Seabrook. It is a large golden-colored fig with a delicious flavor. Another fig quite similar to it is the Alma fig, a large, tan-colored fig developed by Texas A&M, that has a honey flavor. Kadota, a California staple, is a green fig with a tan interior, and does okay here, though it's better for cooking than eating. Dr. Bill Welch, a great horticulture professor at Texas A&M, favors a rare variety called the South Carolina Lemon fig. When it ripens, it is the color and size of a small Eureka lemon, and has a delicious, sweet/spicy flavor. But I don't have one of these.

Ginger finds that all the figs make attractive tan-colored preserves except LSU Purple and Blackjack, which turn unattractively black.

Young pecan tree

Nuts

…Nut tree produces nuts 15 to 20 years from planting

…Harvest in the fall, after the first norther comes through, from October through November

Nuts are a lot of trouble to grow in our region due to various diseases and insects that can attack the trees or the nuts. The great insect problem is the leaf-footed stink bug, which ruins the nuts and makes them very bitter.

Our experience with nut trees has not been happy.

ALMONDS: We've killed a couple. They're like apricot trees. They need care, might produce a nut or two, but really don't want to live here.

HEART-NUTS: These are good-tasting nuts, and grew remarkably well for awhile. I found out why when I fixed a leak in a nearby pipe. The trees had an abundant supply of water, but died immediately when I fixed the leak.

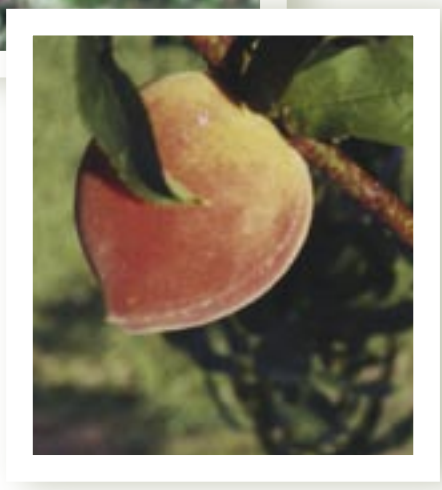
PECANS: I have three or four pecan trees. They grow fast, take up a lot of space, make great shade trees, but they're hard work. They have to be sprayed with zinc and other products occasionally, have to be carefully and frequently fertilized, and sometimes have to be watered — in essence, they are not carefree trees.

However, the people we know who pamper their pecan trees get very good harvests of good quality pecans. Galveston County hosts a pecan show every year in November or December at the Walter Hall Pavilion in League City, Texas. Attending this show is a good way to familiarize yourself with the varieties that grow best in the area, and talk to the prize winners who know a great deal about cultivating them.

WALNUTS: We grew both large and small black walnuts. After 10 to 15 years, they only produced a few nuts a year. They weren't worth the bother.

Sam prepares pecan graft wood

Judging pecans



Peach

…Produces fruit 3 to 5 years after planting

…Harvest fruit from mid-May to mid-July depending on the variety and the weather

We grew some delicious peaches for a few years. We planted the trees on high rows, and did the best to provide them with good drainage. However, the land itself didn't drain well. In the winter, we had standing water in the ditches between the trees during some wet years. When the trees were small and didn't have deep root systems, they were okay. But when the trees got big and their root systems went deeper than the ditches between the rows, the trees drowned in the standing water. Our nearby peach-grower friend grew wonderful peaches for decades because his property backed up to a large county drainage ditch. He never had standing water even in the ditches between his trees.

How I Planted Peaches

I had put peaches on large raised mounded rows, 16 feet wide from the low point on one side to the low point on the other side. I used 20 Nemagard seedlings for rootstock, the recommended nematode-resistant rootstock used by professional peach orchardists. Arnold Lippert, a friend and fellow peach grower, brought me an assortment of scion wood for the grafting of peaches, plums, and nectarines. The rows were 150 feet long. I grafted the seedlings and set them in the rows 15 feet apart. This filled up two rows.

Not Carefree Trees

All the trees survived the summer, then I realized I had a big problem. I needed to irrigation the trees. I rented a ditching machine, bought 700 feet of 1 ½ inch PVC pipe, 300 feet of 1 inch PVC pipe, fittings and valves for both pipes sizes, a 3 inch diameter shallow well, and a high volume 1 HP pump. All of this was bought on my $100 a month allowance. A man that I had worked with called and offered me a part-time short-term job. So, I worked a couple weeks, but when he left, I quit. By this time, I had enough mad money to put in my irrigation system and stay within my budget.

I wrote Dr. Sherman at the University of Florida an inquiry about the Okinawa hybrid and Florida Guard rootstock that I had heard about. He set me about 250 seeds from each tree. I gave away all I could but still had way too many seeds left. I cracked the shells and remove the seeds, then placed them in a plastic sealing bag with sterile moist sand. I stratified them in the refrigerator for a month, and took them out and planted them in pots. When they got large enough I planted them in the orchard and grafted them as I acquired scion wood of something I didn't have.

I also bought a few peach trees from TreeSearch Farms — some from Tennessee and a few from Florida.

I was running out of room so I planted trees in between the original ones planted plus two more rows with a 7½ foot spacing. I also planted a number of them around the house.

We had a very wet winter where the rainwater stood in the bottom of the rows for a couple months when the trees were two and three years old. It didn't bother the trees in the least and I thought I had it made. One year, I sprayed Imidine, a low environmental impact spray, for plum curculio, but that became too much of a hassle. Then a few years ago, I ran across a number of articles where some of the English cattlemen were linking continued use of Imidine on cattle to mad cow disease. Scary.

When the trees got to be five years old, they had a nice size and were getting ready to come into production. Then we had another long wet winter. I wasn't too worried. After all, they had survived a long wet winter three years earlier. What I didn't take into account was that the trees were a lot larger, and the roots extend farther away from the trunk of the tree on the mounded high ground. The water never got within four feet of the trunk of a tree, but 75 percent of the feeder roots were underwater for weeks — and drowned. I had planted both low chill hour trees (those that require temperatures between 32º and 45º Fahrenheit to produce fruit — approximately 300 hours at those temperatures on the Upper Gulf Coast of Texas) and high chill hour trees (those that require 450 chill hours or more). The low chill trees bloomed out fine and started putting on leaves — then they started dying. Within two weeks, everything above two feet from the ground was dead. The higher chill hour trees tried to put on a couple leaves, and then just dropped dead. We had about a half a dozen trees with one or two limbs still standing on the high end off the property.

The experience was a little upsetting, but I learned that peaches did not fit my criteria of easy care and no spraying of a pesticides.

Varieties

My favorite yellow peach is Florida King. It is a large peach, on a very productive tree. It's best if you wait until it's slightly soft before it is picked. It doesn't matter how red the peach is, and the color can be misleading. If you pick a reddish peach one day before it starts to soften, it will taste like cardboard. My favorite white peach was FloridaGlo. Its taste is equal to Tropic Snow, a delicious and popular variety grown locally. FloridaGlo is a larger peach than Tropic Snow, and a more productive tree for me.

We emphasize that low chill hour peaches like Tropic Snow and TexStar do well in our region, provided they have excellent drainage and are meticulously pruned, sprayed several times, and the fruit thinned when it becomes crowded on the branch.

They take a great deal of care, but many people think they are really worth it.

Plant in rows to keep their feet dry

Florida King

Pear

…Produces fruit 8 to 10 years after planting

…Harvest fruit from mid-July to mid-September, depending on variety and weather

There are two limiting factors to growing a variety of pear trees on the Upper Gulf Coast of Texas. The first is lack of the necessary high number of chill hours required by many varieties of pear tree — which is almost impossible to overcome. We might get a very rare chilly winter, where temperatures hover between 32º and 45º Fahrenheit — but that's a once every 20 year event.

I read that some farmers in Taiwan purchase scion wood with bloom buds already formed from a colder region, and grafted them onto these their lower chill hour trees (20,000 grafts per acre) thus overcoming the chill factor problem. But most people won't go to those extremes. It's just easier to buy a low chill hour pear nowadays — and there are many good ones for our region.

Fireblight

The next limiting factor to growing pears is a disease called fireblight. The pear leaves and stems of the affected area looked like they have been in a flash fire — they turn black suddenly and the upright stems curl over like a shepherd's hook. You can spray the tree with special antibiotics such as streptomycin while the tree is in bloom. But this is just a stop gap measure, in my opinion. Almost all pear trees will develop fireblight, which is a bacterial infection carried by wind and birds. And it's helpful to know if your tree has any resistance to fireblight. There is a wide range of resistance among the pear varieties — from highly susceptible to almost impervious.

Fireblight usually starts on twigs and very small branches. If not stopped immediately by pruning out the infected wood, the blight will proceed up the limb to the trunk and will eventually kill the tree.

The infected branch or limb should be cut off 8 to 10 inches below the infection — in healthy wood — and the shears or tools you use should be disinfected with alcohol after each cut.

Some trees have an inherent resistance, and the blight will stop before it goes into a limb or branch.

Resistant Varieties & Non-resistant Ones

There are three distinct types of pears: the European soft dessert pear, the oriental crisp and juicy pear, and hybrid crosses between the two.

Most European pears are extremely susceptible to fireblight. The oriental pears vary from highly susceptible to highly

resistant. The hybrids vary from slightly resistant to highly resistant. The amount of fireblight seen will vary from one year to the next too, depending on weather conditions. The ideal weather for fireblight's growth is a chilly, wet, humid spring.

You probably won't see fireblight on a tree until it starts blooming. If you have time in the spring to check the tree at least every other day, you might consider leaving the fireblight alone on a single limb on a young tree to see how far and fast it will travel. This will give you an idea of how close you have to watch that tree for fireblight in the coming years. The twigs on some pear trees — like Keiffer, Pineapple, Fanstill — will die back to the branch, and then the fireblight will stop. On other trees, the fireblight will enter the branch, and you can see it moving down the branch from one day to the next. Cut off the infected branch as instructed above before it can do any serious damage on such a susceptible tree.

If you decide to grow the susceptible to moderately susceptible varieties of pears, I suggest you acquire some *Pyrus calleryana* (calleryana) rootstock and graft individually limbs 8 to 10 inches from the trunk. Calleryana is extremely resistant to fireblight. So if for some reason you fail to cut out the infected branch or limb, the fireblight should stop when it reaches the calleryana. You will lose one branch and not the whole tree.

The fireblight bacteria can enter the tree through damage spots in the bark as well as through the tender blooms. When you do your annual pruning in the winter, cut out all crossing or rubbing limbs which will injure the bark.

Also avoid feeding high nitrogen fertilizer that will cause a flush of tender susceptible growth.

To reduce the time it takes to bring the tree into production and increase yield, you should use spreaders (a small board wedged in between the trunk and a limb), weights, stakes, or rope to train the upright growing limbs to a 45º angle. Be careful not to damage the bark on fireblight susceptible trees.

Fireblight on pear

Cedar rust on pear

Chill Hour Issues

Beside their susceptibility to fireblight, most European dessert pears — like Bartlett, Bosc, and Comice — have high chill requirements, too high to be grown along the Upper Gulf Coast of Texas. That leaves you with the oriental and the hybrids varieties.

Because of the wide variation in pear taste and texture, and a wide variation between personal preferences, I suggest you try tasting various southern pears if possible, especially if you have limited space, before you purchased a pear tree.

The Gulf Coast Fruit and Nut Study Group in our region held an annual a pear and jujube tasting seminar in the late summer to early fall, so the public could become familiar with the various varieties. There were usually 40 or more varieties of pears grown in this area to taste. The Galveston County Agricultural Extension Office kept the results of these tastings, just to keep track of public preferences.

The hybrid pears vary from extremely hard with a large number of grit cells (Keiffer) to a very soft pear without grit cells (Warren). The Warren often wins our taste tests, but is slow to start bearing — 10 to 12 years — and produces very few fruit when it does start bearing. It has about a 400 to 500 chill hour requirement, too high for most of our mild winters. However, I have read a couple accounts from commercial orchard owners saying they were harvesting bumper crops from their Warren pears. They had both planted a row of pear trees that bloomed at the same time as the Warren pear next to the Warren pears. Since they never saw any bees pollinating the Warren pears, their theory was that the prevailing wind blew the pollen onto the Warren trees. If you just have to grow a Warren pear you might try grafting a limb from a different variety on the up wind side of the tree.

The most consistent and heaviest producing pear we have is the Pineapple pear. It is a firm pear, does have some grit cells, and does not keep well in the refrigerator — only about six weeks at the most. However, it is very good for cooking and can be eaten fresh. We have several other hybrid varieties that have fruited, and several more than have not yet produced fruit. The ones that have fruited are Fanstill, Atlas Super Orient, Spaulding, Biscamp, Southern Bartlett, Tennessee, Keiffer, and Warren (only four pears).

One year, the Spaulding did have a large crop, but the critters ate nearly all of them. The Fanstill, Biscamp, and Southern Bartlett are all three softer than the Pineapple and have fewer grit cells. But they seemed to need a few more chill hours than we've received in the last few years to produce a good crop.

The Fanstill leafed out the first part of February one year without any blooms. The last week in February, we had a week of cold weather and the temperature remained between 38 and 50º Fahrenheit for five or six days. The Fanstill lost its leaves and then put on a few blooms before it leafed out again.

After the cold spell, the Asian pears — Hosui, 20th century, and Ya Li — each put on a couple of blooms and set two or three pears. None of the three trees received enough chill hours for the leaves to break dormancy. The leaves manufacture food for the tree. But after a couple years without leaves, the tree will use up its reserve energy and die.

Favorite Varieties

My personal favorite is the Ya Li. It has a sweet mild flavor, and crisp juicy texture. The fruit will store in the refrigerator for six months without any special treatment, and will taste as good as it did fresh from the tree. Ginger likes the Pineapple pear, for its slight fragrance of pineapple along with its excellent cooking qualities. The Hosui is another large, juicy, sweet, bronze-colored Asian pear that will keep about four months in the refrigerator. I have several other Asian pear varieties that have not fruited because of their youthful age and or lack of chill hours in the last couple of years.

Other pears that have done well in our taste tests include the Asian pear Shinseiki and Hosui, and the hybrids called Orient (which enjoys exceptional fireblight resistance) and Tennessee.

Plum

…Produces fruit about 5 years after planting

…Harvest fruit from May to July, depending on variety and weather

Plums are much heartier and easier to grow than peaches. One has to be careful to get a plum variety that has low chill hours — most of the California varieties are far too high for our region. Furthermore, plums have to be sprayed for borers and the plum curculio, which will certainly destroy the trees if they're left untended.

Plums and Me

We had been living here for about three years when my brother drove in from Oyster Creek. He had seen an advertisement for plum trees for five dollars each. I gave him $10, and after a couple hours he showed up with two plum trees without any name tags. Twenty-five years later, I learned the trees had names other than peach, plum, pear, pecan, and so forth.

We planted one of the little things about ten feet from the house and six feet from the front walk. The little thing sat there surviving for about ten years before it decided to grow. A friend gave us a couple of wild plums, and we bought two more. We set out all four in front of the house.

We were wandering around on the outer fringes of a nursery one day when we spotted a plum tree in a pot that was full of fire ants. The manager walked up and said we could have it if we would get that thing out of there. We loaded it in the back of the pickup and came home.

The Powers Plum

We have never been able to identify the plum tree that my brother brought us. In the spring we would pick a couple dozen plums and take off on the back roads looking for old nurseries or orchards. We found a surprisingly large number of these old nurseries. Nearly everyone took one look at the fruit and said it was Methley. After they took a bite they all said it was too sweet to be a Methley. Several of the men that were still in business wanted some trees to sell. A man in Alvin said he had tasted one like that when he was a kid. He said a man out west of Alvin was hybridizing plums, and he had a plum that tasted like mine. An elderly man in Friendswood said when he was a kid he had ate some that grew wild on a creek bank that tasted like mine.

So one year, we saved the seeds from this plum tree. I gave my friend 150 and I kept 150. I had one germinate and he didn't have any germinate.

Since we couldn't identify the plum we called it the Powers Plum. It tasted wonderful, like a Bing Cherry. Besides having the best tasting plum I had ever eaten, I thought we had a plum curculio resistant variety. We wouldn't see a half dozen bad plums in the whole crop — and we picked bushels of plums from that tree. We weren't getting a half dozen good plums from the other five trees. I cut them all down to put in raised beds for roses and a couple peach trees.

The next year, we didn't get over a half dozen good plums from the Powers Plum. We were mystified. The following Christmas, our son-in-law gave me a spray rig with a 16 gallon tank and pump with a 12 VDC motor. He wanted me to spray the tree so he could have some plums.

What Happened

In 2008, the plum tree died of old age. We had grafted it on some younger nearby trees, to keep it going, though.

The "Don't Bother" Trees: Apricots and Pluots

from Sam

These can be very problematical in our area, so plan on spending a lot of time pruning, spraying, and watering if you want any.

Apricots

- Don't bother.
- They don't want to live here.
- We've heard anecdotal stories about people growing apricot trees successfully here, but our experience has been dismal.
- We'll get a couple very small fruits on a tree some years, and then they'll drop off.

Pluots

- These have chill hours too high for our region to be really successful.
- They're grown on peach rootstock which will drown in standing water.

Chapter 5

Berries and Grapes

46 inch tall berry vines

Most of the grapes and berries you find at the grocery store won't grow or produce fruit here for a variety of reasons. Our climate is not cool enough for most of the California grapes, or get some terrible disease or fungus that destroys the fruit or the plant. Raspberries are from the north and require much colder weather to thrive. Blueberries require an acid soil and their roots just won't tolerate our alkaline gumbo ground. But never say die. You can grow many of these fruits too, if you want to work hard and spend some money doing it.

Setting up for blackberries

Berries grow well through field fencing

Berries grow well through field fencing

Blackberries

…Produce 2 to 3 years from planting

…Harvest fruit from Mother's Day in mid-May to early July, depending on variety and weather

Blackberries are a biannual crop — that is, they will grow a cane this year, and next year this cane will produce fruit and then die. At the same time this cane is producing fruit, the plant is growing more canes for next year's production.

There are things to consider before you start planting blackberries:

LOCATION: Plants need full sun if possible. The blackberry plant will do quite well in a raised flower bed or in the middle of a St. Augustine lawn.

SPACING: A blackberry plant could be as much as two to three feet in diameter and very thorny — so you need some space in order to have access all the way around the plant.

SUCKERS: Blackberries reproduce from the roots, sending up suckers for new plants. They may come up five to ten feet from the original plant. Any damage to the root will cause it to send up suckers. The upside to the suckers are that the thorns are very soft until the plant is a foot or so high, so you don't need gloves to pull them up. Pulling them up is preferable to cutting them off.

Don't Grow Them on a Chain Link Fence

Blackberry canes should be topped at five to six feet in height to force lateral branching. A three to four year old plant will produce several canes with a diameter of a quarter each year. So do not grow them on a chain link or any other kind of fence. By the time you have finished harvesting the berries, the canes will be dead and very stiff, with many large thorns. Imagine yourself trying to get that mess cut up, cleaned out, and removed. Then imagine the number of trips to the stores you'll take to buy medical supplies — along with the herbicide Roundup.

Texas A&M recommends running two or three wires between a post, and tying the canes to the wires. After trying this for a couple of years, we experimented with some old field fence that I cut into 16 inch wide strips. I put cross arms on the post about 18 inches high. Finally, I fastened the field fence to the cross arms horizontally, so the canes could grow up through the holes.

I installed another strip of wire three feet above the first.

Now I don't have to tie the canes to anything, since the field-fence provides support. I can cut the old canes into three pieces and remove them with comparatively little effort.

Other Ways to Grow Blackberries

There's a less involved method of growing blackberries, if you don't mind 50 to 60 percent reduction in production. Plant the vines two feet apart. Then every year prune all the canes back to two feet high. Cut the old canes from last year to the ground and burn them — or put in garbage to be hauled off. You should still be able to harvest four or five gallons of berries from a 15 foot long row.

A third option for growing blackberries would be to grow them similar to growing staked tomato plants. Drive a 6½ foot steel T-post 18 inches into the ground. Then plant the blackberry vine at the base of the post. Each year select the three or four best looking suckers, and keep all the rest cut off at ground level. As the canes grow, try to spread them equally around the post and tie them to the post often enough and tight enough to keep them growing upright against the post, and loose enough to allow the canes to increase in diameter to the size of a quarter. When the canes grow past the top of the post, prune them all off to post height and maintained that height throughout the year. When the canes cannot grow taller, they will increase the number and vigor of the lateral canes, and they should cascade much like a weeping mulberry tree. You should be able to harvest two gallons of berries a year from each plant from this system.

Blackberry cane

Irrigation

I laid black plastic tubing on top of the bottom wire. Then I connected ¼ inch black tubing to the main line, and installed my drip emitters about eight to ten inches above ground.

By installing the emitters closer to the ground, I could clean the sand out of the emitters without having my hands torn up by the blackberry thorns.

The blackberry plants should be set about three feet apart in the row. In a raised bed with good dirt, compost, and mulch and with a drip irrigation system, you should have no trouble harvesting a gallon of berries per linear foot of row per year.

Blackberry production goes into the rapid decline after about eight to ten years, and the vines have to be replaced, preferably in a new location.

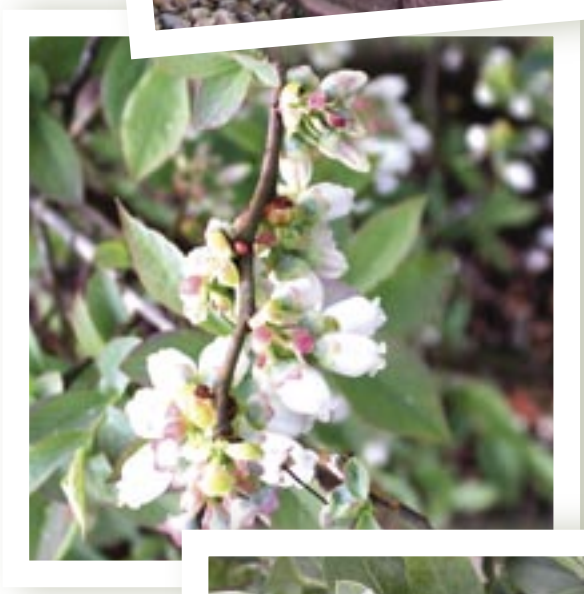
Sam checks blackberries

Pruning out dead canes

The Right Variety

It's important to grow the right variety of blackberry for our region. For me, Rosborough and Womack seem about equal in health and production with both quite a bit ahead of the well-known Brazos Blackberry. The Rosborough is the sweetest of the three varieties, the Brazos is the most tart, and Womack is about halfway between the other two. For fresh eating, the Rosborough is by far the best. But if you're making pies, you will have to cook for a long time or add cornstarch to thicken the filling when compared to the Brazos.

We still have Rosborough, Brazos, and Womack and killed off some Shawnee, Thornless Boysenberry, Brison, Olallie, and several other varieties of blackberries. Some of these varieties probably would have survived with a lot of 'TLC', but why bother when I can get a half gallon per foot of our old reliable berries without doing any work except picking the berries, cutting out the old canes and disposing of them? Some of the thornless varieties from Arkansas would be worth quite a bit of extra effort because of the easy picking. Unfortunately, we do not get enough chill hours south of Houston to grow them successfully.



Blueberries

…Produce in 2 to 4 years from planting

…Harvest in summer, depending on variety

Rabbiteye blueberries can be grown in this area with very little effort after the original expense and labor. You will need to install a raised bed, and buy two or three low chill varieties for cross pollination. You will also probably need to net the bushes to keep the birds from getting the fruit when it starts to ripen.

Building the Bed

You must build a raised bed about ten inches high in a sunny location that doesn't have standing water. Another option would be grown the blueberry bushes in large (at least 35 gallon or larger) pots.

I planted my bushes in a raised bed containing pure Canadian sphagnum peat moss. But it would probably work better to add ten percent sharp sand and ten percent compost by volume, wearing a dust mask while mixing.

Blueberries need a pH of 4.5 to 5.2 — very acid soil. You can maintain this low-level pH by adding sulfur to the planting medium. It is advisable to prepare your bed six months to a year before you plant the blueberry bushes. This gives the sphagnum moss time to settle. You can adjust your pH level again, just before planting.

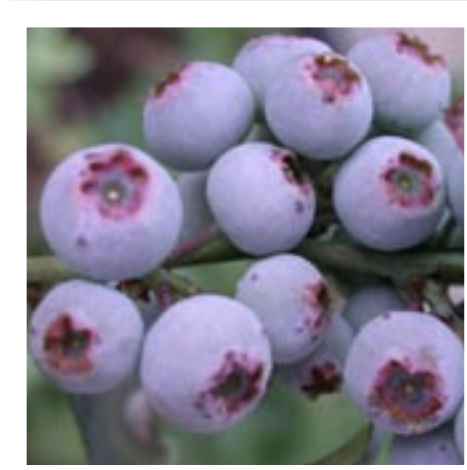
I didn't start out so much to grow blueberries as to test out Urban Harvest director Dr. Bob Randall's claim that you could grow blueberries in Houston — and they would survive without having to be watered twice a week.

I did everything wrong. Nonetheless, four of the six original plants survived for five years. I started the bed in the spring of the year by digging down into the clay level around my pond, to use as one side of the raised bed. Then I used hollow tile for the other three sides. I spread out four sacks of four cubic feet of sphagnum peat moss.

The blueberry plants need at least five gallons of water a week. It might be advisable to install a simple automatic watering system. I installed a drip irrigation system, that I later found out didn't work. Then I added four more sacks of sphagnum peat moss. By this time, it was the middle of the summer when I started looking to buy my blueberry plants for planting. They were on sale for a dollar a plant. I put in six plants in an area that should have had three at the most.

The following two years were among the driest in recorded history, but four of the six plants lived. They received no fertilizer since I planted them, and were watered maybe once a month over two years.

Netting blueberries to keep out critters



Beautiful ripe blueberries

The four surviving blueberries are Brightwell, T.Tif Blue, Woodard, and Bluebell. I purchased a 55 gallon plastic drum so I could add acid by lowering the pH of my alkaline irrigation water. Dr. Randall was correct. You can grow blueberries here — without much extra effort.

Raspberries

…Produce fruit 2 to 3 years from planting

…Harvest in mid-May

We had raspberries for several years before I managed to kill them. The only hearty variety that I found was Dorman Red. The plants are extremely hearty, but I got very poor production from the plants. Worse, the taste was rather insipid for my taste buds.

I had one half of a row of Womack blackberries and one half row of Dorman Red raspberries, along with a full row of Bermudagrass and a liberal sprinkling of nut grass. I would pick a half gallon of blackberries and a half cup of raspberries.

I had given six plants to a friend who claimed she was harvesting a quart of berries a day from a row half as long as mine. So I decided to pamper them. I spent a day with a water hose and spading fork digging out all the Bermudagrass roots that I could find. I put a couple inches of pine bark on top of the row. I had a drip irrigation line running the length of the bed. In a couple of months, the blackberries were doing fine, and the raspberry plants were dead. I pulled the mulch back away from the plants and discovered the ground was bone dry. The mulch had absorbed the water from the drip system and prevented any water from reaching the ground.

I replanted half the row of dead rasberries with a new variety of blackberries.

Varieties

I have tried a few Bababerry, San Diego, and Oregon 1030 raspberries. I preferred the taste of the Bababerry, but none of the three plants lasted very long under the conditions I was growing them. If you have a location that has early morning sun and is shady from noon until dark in the summertime, any one of the three above would be worth a trial.

If you don't have noon shade and want to grow raspberries, Dorman Red is your best chance. The foliage on the Dorman Red was so beautiful that my wife Ginger wanted to use it to fill hanging baskets, like they do with strawberries in flower arrangements — but she never did.

Grapes

…Produce fruit 3 to 4 years after planting

…Harvest muscadine grapes in May/June

…Harvest cluster and wind grapes in July

We grew a lusty variety of muscadine grapes on arched trellises in our back yard for many years. Eventually, we had to tear them out to put in our new septic system. But we still have grape vines climbing the trees in that area.

Muscadine or Mustang grapes are native to our region and do well.

The grocery store varieties — Thompson seedless, Red Globe and most wine grapes — won't do well in our area because they require much cooler and drier weather.

However, our neighbor Haak Winery does a very good job of growing two wine grape varieties, Old Spanish which they make into Port and Madeira wine, and Blanc De Bois, a white semi-dry wine for which they have won many awards.

Typically, they prune their vines in late January and harvest grapes the first week of July — the first grape harvest in all of Texas because it is so far south of most of the grape-growing regions. The 2007 harvest was almost ruined, however, because we had relentless flooding rain in June and July, causing the grapes to get waterlogged and ruin on the vine.

Chapter 6

Greenhouse Tropical Fruit

Ginger checking for fruit in the greenhouse

Our greenhouse is established on the site of our old rabbit hutches. Our daughters raised show rabbits for many years, and we had ten years of rabbit poop in the soil to which we tilled in sharp sand. We bought the building materials from a commercial grower that had gone out of business in 1990. The trees planted there loved the soil and thrived.

Our greenhouse is 15 feet wide x 35 feet long x 12 feet tall. If I had it to do over again, I'd make it taller and wider, because one underestimates how big these tropical trees can get until they start to grow.

Because the greenhouse has a roof on it and doesn't get rainwater, we give the soil a good drenching soak at least once or twice a week in the summer when the sides are open. This is important. You'd be surprised how fast plants can dry out in a greenhouse.

Banana

…Produces fruit in 1 to 2 years, in the greenhouse

…Harvest when the bananas are green, or when they're yellow and ripe

Bananas are an easy to grow crop in our area that takes very little care except for some wind and freeze protection.

From the time I was about eight years old I could never see why people would try to grow bananas in this country. Walking from the bus stop to the theater, I would pass the train station in Alvin that had a lot of bananas on their property. Every winter they would freeze and make a nasty mess that someone had to clean up. After I grew up, I've had several people offer me homegrown bananas to eat. I couldn't stand the taste of the them. I always loved the store-bought bananas.

After I retired, I found a company in Louisiana that had dwarf bananas plants for sale. I ordered three varieties since they only grew to eight feet tall. I purchased a dwarf Cavendish (the variety I enjoyed all my life from the grocery store), a Grain Nain, and a Rajapuri.

Trials In and Out of the Greenhouse

I knew I liked the Cavendish so we put it in the greenhouse. The Dwarf Cavendish typically only grows eight feet tall, so it's perfect for growing in a greenhouse. We planted the Rajapuri in an old compost pile underneath a pear tree and on the south side of the greenhouse. A couple of years later we planted one pup in the greenhouse. We planted the Grain Nain in the citrus house without any overhead protection and it never produced any fruit. We planted one of its pups in the greenhouse and it has produced bananas. We got a stalk of bananas every couple of years from the Grain Nain planted outside.

We had a commercial grower from Florida tell us that, in his opinion, the Cavendish was the most cold hearty of the three. We've never planted one outside to see what happens. We have also heard that if it's planted outside, the Cavendish banana will die before it will bear fruit.

We've always grown the Cavendish in the greenhouse, and it's given us wonderful fruit for many years.

Care of Banana Trees

Nearly all the banana plants you see in this area are 12 to 15 feet tall, grown outside of a greenhouse somewhere in the landscape. They're hard to protect from a freeze, and these trees will always die back in a hard freeze. Growing dwarf varieties in a greenhouse simplifies freeze protection.

The banana plant will benefit from periodic watering, and

from ¼ cup of ammonium sulfate fertilizer (21-0-0) a month after the young plant starts growing. Fertilizing should be increased to two cups per month when the plant starts fruiting.

I have to be honest: My banana plants don't receive anywhere near this type of great treatment. But your harvest will be better if you tend to them.

How the Banana Grows

The banana plant will start to bloom when it has grown 43 leaves. When the plant starts to bloom, it will leave little bananas on the stalk as it grows. When the bananas stop forming little bananas, cut off the bloom to conserve the plant's energy for the fruit. You may also have to tie or brace the stalk of bananas to keep from putting too much weight on the trunk.

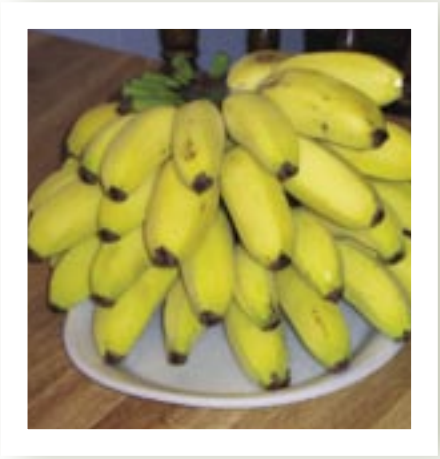
Local Bananas are usually 3 inch long

Advice on Harvesting

Bananas are usually harvested while they are still green after all have reached their full size (length and diameter). The stalk is cut off above the first banana and the stalk is hung from this stub with a rope or wire in a protected area we're critters can't get to them. This is done for commercial shipping, and by most knowledgeable people for their own use.

We just leave them hang on the plant and picked them off as they start to turn yellow.

After the bananas have been harvested, cut the main trunk off close to the ground to conserve energy in the roots for the pups (suckers) next years crop of bananas. Some of the suckers can be cut loose from the mother plant with a sharp spade, and dug up to move to another location or give away.



Favorite Cavendish banana

Flavor

As far as taste is concerned we could tell very little difference between the three varieties — Cavendish, Grain Nain, and Rajapuri. As far as mess goes the dwarf plants are cut down after they bear. Since they are only half as tall, there is not nearly as much mess I remember as a child.

Kwai Muk

…Produces fruit in 10 years from planting

…Harvest fruit in August

This Kwai Muk is rarely seen outside the Far East. It is a small tree, reaching maybe 12 feet tall, and produces quarter-sized ugly fruit. The fruit is somewhat citrus-like, pulpy, seedy, very sweet/tart, and quite good. Another surprize is that you eat it skin and all.

Mango

…Produces fruit in 3 years when grown from seed

…Harvest in late summer

Our mango trees were all started from seed. We just found the varieties we liked at the grocery store, cleaned the seeds, put them in pots, kept them moist and warm until they sprouted. Once we deemed them large and robust enough, we planted them in the greenhouse.

Mangos get to be about eight feet tall, but some of ours grew to 12 feet tall. They hit the top of the greenhouse, and then bent over.

One can prune the tops, and let them produce more side limbs.

Monstera

…Produces fruit in 5 years after planting in a greenhouse

…Harvest fruit a year or more after it flowers

The *Monstera* is a vine that came out of Southern Mexico and Central America, where it can climb as high as 60 feet in a tree. This beautiful plant is abundant in Hawaii too, where its large, graceful, Swiss cheese holed leaf is used in floral designs and clothing decorations.

On the Upper Gulf Coast of Texas, it is used primarily as a foliage ornamental plant, either outside or in a big pot on a patio. During winter, people will throw a sheet over it for cold protection. With this kind of treatment, very few people ever see the beautiful giant Jack-in-the-Pulpit looking flower. Far fewer people even know that it has edible fruit.

The flower blooms white like a Calla Lily. The shroud will turn dark and fall off, leaving a green seed pod in the shape of a slender ear of corn that will keep growing for a year or more, depending on the temperature. When the seedpod starts to mature, the green kernels start separating and falling off from the bottom. You can cut the fruit off then, and eat the kernels underneath as they are exposed and turn light brown. Wrapping the fruit in aluminum foil or plastic wrap would help to ripen the fruit evenly from end to end.

When fully ripe, *Monstera* fruit looks like a stalk of white corn. The kernels mature a few rows at a time, and taste like bananas, mangos, pineapples all combined.

The immature kernels should not be eaten since they have a stinging, slightly corrosive chemical in them that breaks down when the kernel matures.

The plant itself has to be kept warm, and has to be given time to mature and grow, before it can produce fruit. Hawaii typically gets no colder than 60º Fahrenheit. So it is strictly a greenhouse plant. If you want flowers and/or fruit, don't let the temperature around the plant drop below 40º Fahrenheit.

Papaya

…Produces fruit from seed in 1 to 2 years depending on variety

…Harvest when it turns color, year round, if the tree is in a heated greenhouse

Papayas are fast-growing herbaceous plants that are male, female, or bisexual. The smaller papayas that are in the produce section of the store are grown in Hawaii, and fall in the bisexual category. The large size fruit, small watermelon size, come from South America, and are male and female plants. The heterosexual plants have been known to change sexes when there was no opposite sex available. The female and perfect flowers are attached to the main trunk, the male flowers are on the stems three to six inches long.

The orange-meated Hawaiian fruit generally make a shorter plant, and will produce fruit in one year. The yellow-meated variety grows too tall and takes too long to produce fruit on the Gulf Coast. It is hard to produce fruit on the South American varieties for the same reason.

If you want to try the South American varieties, plant five or six plants close together and cut down all the males except one when they start to bloom.

How To Grow From Seed

To try growing your own papaya when you find one you like in the store, remove and wash the seeds, and let them dry for a day or two. Then store them in a bottle or plastic bag.

Plant four or five seeds in a 5 or 10 gallon pot in November or December, and keep the pot in a garage or greenhouse until the likelihood of a frost has passed. Then plant the trees in the yard, preferably on the south side of a building. Keep the ground moist and well mulched. You should have fruit ripening by late summer or early fall.

When a frost defoliates the plant you can pick the fruit, peel and cut it up, and cook it like squash. The trunk of the papaya is similar to bamboo: it is hollow with membranes filling the hollow tube every eight to ten inches.

It takes a hard freeze — 25º Fahrenheit or lower — to kill a mature plant. But a hard frost will kill the top first. If left alone, the plant will die from the top down. To save the tree, you can saw the plant off below the dead part. Then cover the top with plastic and secure it in place with tape to keep water from getting down into the hollow trunk. The plant will produce new trunks from below where it was cut off. The massive root system has already established the plant, and it will produce more and earlier fruit than it did the previous year.

One downside of growing a papaya tree is that when the plant dies, you need to dig out the major roots as soon as possible. Don't wait. Digging out the papaya roots after a couple of months produces a major unpleasant odor. Rotten papaya roots make skunk spray smell like perfume.

Occasionally, we have a late or prolonged spring with cool nights. The papaya plant will not start growing soon enough to ripen the fruit before late fall that year.

In my opinion, if you would buy the fruit in the store because you like the taste, you should try to grow your own. There is no comparison between fruit that has been held in commercial cold storage and fruit that is allowed to ripen at room temperature, and then is chilled just before eating.

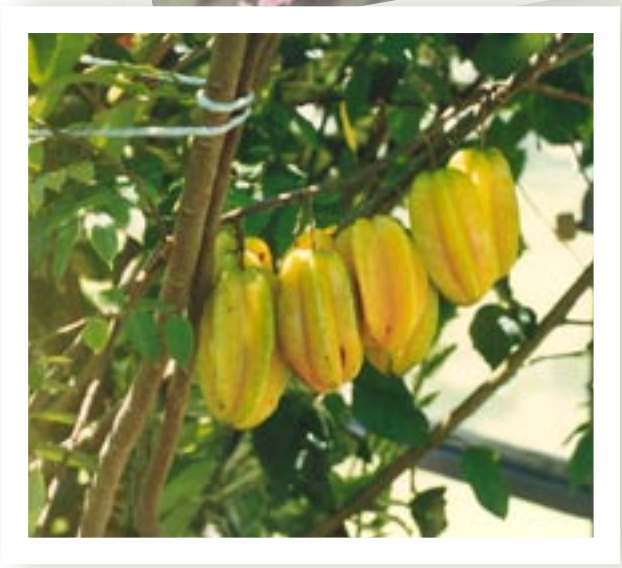
Pitanga or Surinam Cherry

…Produces fruit in 3 to 5 years

…Harvest when the fruit turns color, year round

This very tropical little bush prefers the filtered light and warmth of the greenhouse. It produces a tart little berry that is quite sour, but can be made into a distinctive sorbet. There are both red and purple Surinam cherries. We have grown only the tarter red one, not the sweeter purple one. In extreme Southern Florida, the Pitanga can be grown as a hedge. It will not tolerate frosts or freezes.

In our experience, the Surinam cherry was not productive and not worth the trouble.



Star Fruit

…Produces fruit in 4 to 5 years from seed

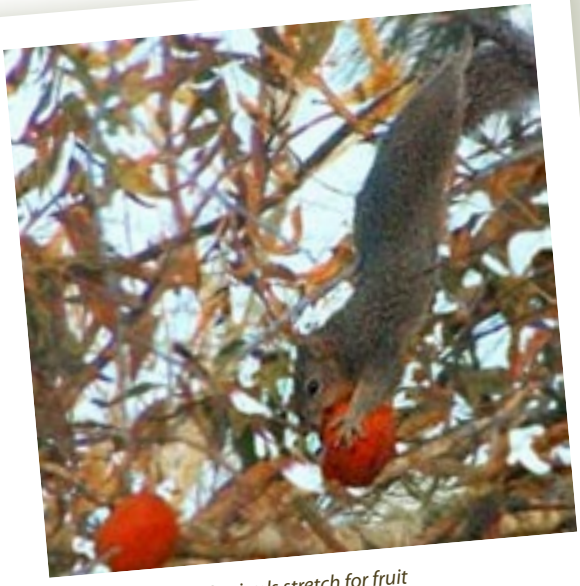
…Produces fruit in one year if you buy a grafted plant

…Harvest usually in the spring, when outer bands on the edge of the yellow fruit turn brown

We grew star fruit from seeds that we found in the star fruit from the grocery store.

In three or four years, we had a small tree that was very productive and had good-tasting fruit.

Chapter 7



Squirrels stretch for fruit

Critters

I have said that nothing bothered jujubes, but the last few years have proved me wrong. I don't like to kill animals and there was always enough fruit for the squirrels, opossums, skunks, an occasional raccoon, and the wife and me.

But when I let the local squirrels have all the food they wanted, I didn't anticipate them bringing all the squirrels within a mile for breakfast, dinner, and supper.

This will also apply to pears, apples, pecans, and persimmons. Birds adore figs, peaches, persimmons, plums, berries — just about anything.

Planning Ahead for the Critter Invasion

Before you plant a fruit tree visualized the tree when it is mature. Is a telephone wire, cable TV wire, or electrical wire going to be close (two or three feet) from the branches of the trees? Is there another tree or building within three or four feet from the fruit trees? If you have any of these conditions, you will have a problem with squirrels in a few years.

A couple of squirrels can strip a 15 year old jujube tree in two days. It's not how many of the jujubes they eat, but how many they destroy. Many will have a tiny tooth mark, or maybe just claw marks. Occasionally you'll see one that they liked, and three quarters of that jujube would be eaten. You will have to deny the squirrels access to the trees except from the ground up.

When you plant a fruit tree (except for citrus, dwarf apple, and peach) start slowly removing the lower limbs below four or five feet. Keep any buds below five feet rubbed off. You can get aluminum sheets about 24 x 37 inches used for newspaper printing plates, cheap or free from printing shops or small newspapers. Wipe off ink with gasoline moistened rag outside of the building. Do not take the rag inside or put in garbage container until all odor has dissipated.

If 24 inches won't give you a couple inches of the lap when you wrap aluminum around the tree trunk, lay one piece on a flat surface, lay another piece on top. Bend the edges off both pieces up than on over. Roll or hammer the seam flat. Make another bend and hammer it flat. Spread the two edges apart and roll or hammer the joint flat. Repeat process with two more sheets. You now have two sheets 45 inches wide and 37 inches long. Wrap one sheet around the tree with its thick side of the seam against the tree. Tie a cord around the aluminum to hold it in place. Adjust the aluminum until the top piece and excess wrap are lined up. Wrap a strong wire around the top and twisty the ends to tighten the wire. Cut off most of the wire ends and hammer the rest flat. Repeat the operation with the other sheet making sure that the top piece covers the wire holding the bottom sheet in place. You can wrap a wire on the bottom panel within an inch off the ground if needed. You can put in a couple of small nails on the edges the top panel if needed. To prevent the neighbors or homeowners association from having a fit, you might try a can of tan (no gloss) spray paint. It might also help to spread a little free fruit to the close neighbors.

A friend had a number of pecan trees, so he went down to City Hall and got a piece of paper giving him the right to shoot squirrels, bluejays, and other critters to protect his crop. He had two patrol cars stop at different times for his discharging a weapon in the city limits. He showed them his permit and after the second car stopped he was never bothered again.

If you live in a country are close to a woody creek in town, you could have a raccoon or opossum to visit at night. If you feed the dogs and cats outside and there is food left in their bowls, you greatly increase your chances of attracting raccoons and opossums. Raccoons will leave a lot more leaves and twigs on the ground than squirrels. A raccoon can strip a tree in one night.

If you want to trap a raccoon, a skunk or an opossum, you will need a large live trap (at least 15 inches high, 15 inches wide, and 42 inches long). I had two live traps one size smaller and tried for years to catch raccoons baiting the trap with everything I could think of including marshmallows. They had sprung the traps a couple of times but must have backed out before the gate latched. Five years ago, I was in a tractor supply store in Alvin when I saw the large live trap. I had some mad money in my pocket and was mad enough at the raccoons that I bought the trap.

I have caught 15 raccoons in the five years since I bought the larger cage, and had caught two the previous five years. We had an open one pound sack of small marshmallows with a few missing when I bought the first large trap. All 15 raccoons were caught on marshmallows from that sack. I point the open end of the trap in the direction I expect the raccoons to come. I start dropping the marshmallows about five feet in front of the cage, and about five feet wide like a fan tapering them back to the opening of the trap. I spread maybe a half dozen marshmallows inside the fan area. I dropped two of three in the cage leading to the back with three or four dropped behind the trip (trigger) plate.

All that is left to do is to wait and see what critter likes marshmallows.

Gallery of Garden Critters at the Powers

An Easy Way to Lose Your Plant Tags

by Ginger

Ever wonder what happed to your plant tags?

Early one year Sam decided to invest in some very nice looking plant tags for his trees and newly potted plants. So he ordered them.

When they arrived, they looked like a winner, bright and shiny aluminum, crimped all around the edges, with a soft center, easy to write on with a ball point pen. A fine wire was threaded in one end for attachment.

Sam got busy making labels, sitting in the warm house at the kitchen table. When he finished he braved the cold and went out and tagged all his plants.

Spring arrived, time to plant, and out he went. A short time later he came back in and said," where are my plant tags? They are all gone." He was looking at me as though I had gone out and taken them all. So I went to see, sure enough most of them were gone, what was left was mangled and bent. Sam said," maybe you blew them off with the lawn mower, or something?"

The mystery remained until about two weeks later, when I was mowing and happened to look up into the large oak tree in the back yard, There, nestled in the crouch of the tree was a huge blue jay nest, full of chirping baby birds and beautifully decorated with shiny plant tags. I went into the house, got Sam and my camera and took him outside and pointed up into the tree and said, "There are your plant tags !"

Epilogue

Rat damage to citrus

Personal observations

There is a law in physics that says nature abhors a vacuum. If you grow a plant and it has no disease or insects problems, you have created a small vacuum. The more plants you grow of that variety the larger the vacuum you create — and something will come along to fill it.

I attended a lecture by a man growing pine seedlings — 20 million seedlings a year. He had been in business for 20 years. The first few years he had no insect, disease, or fungal problems. But the longer he stayed in business, the more things he had to spray for. Each year it got a little worse, and he is still spraying.

Top heavy tree falls over

LESSON **1:** In our experience with growing fruit trees, we found that the birds' and critters' tastes seem to change with ours. If we develop a taste for a fruit that we have pretty much ignored in the past, the birds suddenly decide that it's their favorite too. Perhaps it is like people and their animals, starting to look alike over time.

LESSON 2: One very bad mistake we made years ago and are still paying for is letting the beautiful green vine with red flowers (trumpet vine) on the back fence get started. Ginger thought it was pretty, and I didn't know any better. It turned out to be a big headache. We had used 8 foot long, 5 inch thick, 30 year treated post to build the back fence. The vines grew to the top of the post, then started making a large ball on top of the post. We decided to prune the vines back — and found out a lot of vines were too large to cut with hand shears. After we finally removed the entire vine from the post, we discovered that the vine had eaten six inches off the top of the post, and had made deep grooves around the post from bottom to top. The vines put out aerial roots that attached themselves to any wood surface and start absorbing and destroying the wood.

LESSON 3: If you bring in a load of dirt to raise a spot in order to plant a tree or shrub, you should remove the grass and break up the top of the sod underneath where the grass grew before you put down the dirt. At the very least, till up the grass. Water and roots both take the path of least resistance and they will travel between the dirt and grass. It will take years, if ever, for the roots to go down into the original soil to provide an anchor.

LESSON 4: When the tree develops a little size and gets a little top-heavy, the wind will blow it over without good anchorage.

I realize that I have painted a somewhat negative, worry-laden picture about some of these trees. But remember, this is from my experience. I deliberately set out to see how much stress the plants could take, and still survive and produce.

Also, this was our yard landscape, and we did all this experimentation for fun. The two of us needed a limited amount of fruit to eat, so anything more than that was a waste. Also, this is strictly a hobby, and I didn't want to grow fruit to sell or to write scholarly dissertations about it. I have a large number of different varieties of jujubes, pears, persimmons, and citrus

because when I started planting trees there was no place to go to find out how each variety tasted. If I wanted to taste some exotic fruit, I just planted the tree.

Since I had plenty of room, it was easier to get scion wood and graft my own trees than it was to drive all over the country looking for a particular persimmon I could taste. Usually, if one of us liked some fruit enough to grow it, I would have to buy a tree or acquire some scion wood, and then wait five years for the fruit.

If you are interested in growing one or more fruit trees, my advice is to give it a try. There are very few obstacles that a little "TLC" won't overcome. The basics are fairly simple. Peach tree rootstock needs good drainage or it will drown. Blueberries need highly acid soil. Blackberries need a lot of sunshine. Citrus and tropical fruit trees will freeze without protection. You can't do anything about chill hours our region gets, but there is a large variation of chill hour requirements in the literature for the same tree, so it might be worth a try.

If there is a question you have, it's always best check with the local growers or the county agricultural extension office. They have real life experience in the fruit you want to grow.

You'll be surprised what you can grow. Thoughout all the years of gardening, we always have been!

Good luck and best wishes!

Bibliography

Books

Adams, William and Thomas LeRoy. *Growing Fruits and Nuts In the South.* Taylor Publishing Company, Dallas, 1992.

Ashton, Richard. *Jujube - The Chinese Date*. Third Millennium Publishing, Tempe, 2005.

Davidson, Alan. Fruit: *A Connoisseur's Guide and Cookbook.* Simon & Shuster, New York, 1991.

Lorenzi, Harry, Luis Bacher, Marco La Cerda, Sergio Santori. *Brazilian Fruits and Cultivated Exotics*. Instituto Plantarum de Estudo da Flors Ltd., Sao Paolo, 2006.

Wygrys, Anna, Alcestis Cooky Oberg, Sandra Devall, Herman Auer, Terry Cuclis, Sam Powers. *Ambrosia From Your Backyard: Growing Citrus Fruit on the Upper Gulf Coast of Texas*. GCMGA - Texas Cooperative Extension, Galveston, 2005.

Magazines and Newletters

Pomona, Quarterly Journal for the North American Fruit Growers. All volumes. 1716 Apples Road, Chapin, Illinois 62628

Gulf Coast Fruit Study Newsletter. All volumes. Harris County Extension Service, 3033 Bear Creek Drive, Houston, Texas 77084.

Websites

Fruit Study Group : http://harris-tx.tamu.edu/hort/fruit.htm#news

North American Fruit Growers (NAFEX): http://lists.biblio.org/mailman/listinfo/nafex

— The End —

There are other benefits
of growing a tree that is fruit bearing
and here's a beautiful example
of canned pears.

Canning your fruit can be your signature gift,
your 'pot luck' contribution
or just a way to add to your meal
with a simple dish on the table,
as a dessert or salad addition.