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TEXAS A&M AGRILIFE EXTENSION

Texas Fruit and Nut Production

Peaches

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Peaches are the leading deciduous fruit crop grown in Texas. An estimated 1 million trees are planted statewide, only half of which are planted in commercial orchards of 1 acre or larger.

The demand for high-quality, locally produced peaches remains good, and the future appears bright for the industry. Selling fresh peaches is more likely to be profitable if the orchard is close to a metropolitan center, where high-quality, tree-ripened fruit command premium prices (Fig. 1).

Figure 1. Tree-ripened peaches

The most limiting factor in orchard profitability is late spring frost, and growers should plan on losing one in six or seven crops even in the best of orchard locations. At times, frost has caused crop loss for 2 or 3 years in a row, prompting some growers to leave the business because of loss of revenue and enthusiasm.

In planning a new orchard, prospective growers should take this risk into account and plan orchard size accordingly. If peach production is a part-time enterprise, 2 to 5 acres of orchard may be appropriate; a full-time, one-person enterprise may require closer to a 20- to 25-acre planting.

Site, soil, and water requirements

For long-term profitability, the most important decision a prospective grower will make is selecting an appropriate site. To be healthy and productive long-term, an orchard site must have the proper soil type and internal drainage, water quality, elevation that accentuates air drainage, site use history, and market access.

Soils: Peaches are very susceptible to waterlogged soils. Excellent internal soil drainage is essential to long-term tree productivity and survival. The roots cannot grow without air in the soil profile.

The ideal is a sandy loam topsoil that is at least 18 to 24 inches deep and is underlain with a well-drained red clay subsoil. Avoid subsoil that is blue, gray, mottled, or dull colored because it usually drains poorly.

The subsoil and topsoil must be relatively fertile and have satisfactory water-holding capacities. Although soil testing through an accredited lab will provide information on soil fertility, pH, salinity, and nutrient-holding capacity, it may not indicate the soil's drainage properties. Consult your county agent or and Extension horticulturist to determine if your site and soil is appropriate for peach production.

The ideal soil pH for peach production is between 6 and 7. If the pH is below 6.0, you may need to apply lime before establishing the planting beds. In some high-pH sites, proper rootstocks may help overcome the nutritional deficiencies that are common to alkaline soils.

Water: Avoid sites with high salinity levels in the water. Abundant, clean, salt-free water is essential for commercial peach production. Irrigation water is considered adequate if it has a sodium absorption ratio (SAR) below 3.0 and total salts below 1,000 ppm. A mature, bearing peach orchard can use more than 2,000 gallons per acre per day.

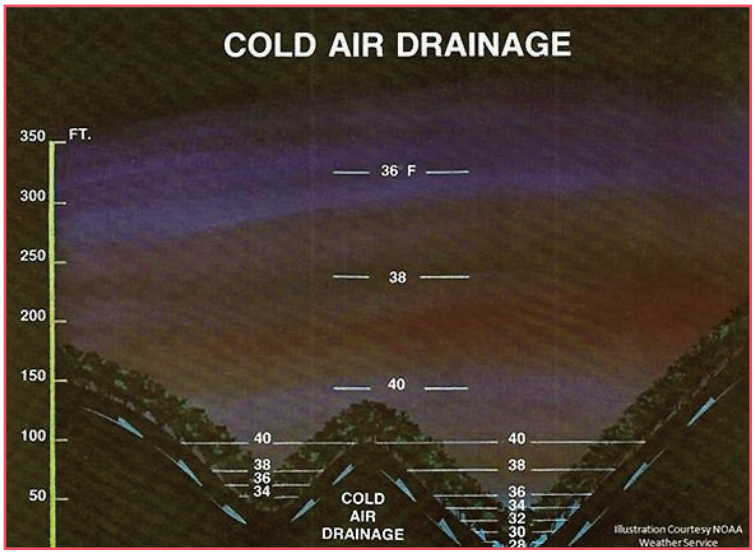

Figure 2. Topography effects on cold air drainage. Temperatures on hilltops may differ from those in valleys by as much as 10°F.

Elevation: To reduce crop losses from spring frost, choose an orchard site that is higher in elevation than that of the surrounding area. Air must move easily out of the orchard to minimize serious damage from spring frosts during bloom and early fruit development. Avoid areas with barriers such as dense treelines to

air drainage. On frosty mornings, temperatures may fluctuate as much as 10°F from hilltop to low-lying areas and can mean the difference in a full crop as compared to a complete crop loss (Fig. 2).

Site history: Because of soil-borne disease problems, do not replant an old orchard site for at least 3 years after it has been cleared. Peach trees perform best on sites where no stone fruit orchards or forests have grown for several years. Also do not plant a site that was recently cleared of standing timber—especially post oaks— because the risk is higher for diseases such as oak root rot *(Armillaria mellea).*

Market: To determine the size of the orchard and the peach varieties to plant, first decide where you will market the peaches. Pick-your-own or retail sales may not be practical in relatively remote areas. Although prices in wholesale markets are usually somewhat lower, these markets are an important alternative for larger orchards.

Peaches are extremely perishable, and there is little flexibility to explore alternative markets once harvest begins.

Varieties

Select varieties with long-term proven production for your area of Texas. Planting unproven or un-adapted varieties often results in disaster and disappointment.

Peaches require a certain amount of winter chilling—typically, the number of hours at or below 45°F in a location—in order to break dormancy, bloom, and grow normally in the spring:

- Varieties that need fewer chilling hours than are common for the area are more likely to bloom early and be more subject to frost.
- Varieties that need more chilling hours than are available may break dormancy late and fail to set fruit.

Varieties recommended for a given location typically have chilling requirements within 100 hours of the average accumulation for that site (Fig. 3, Table 1).

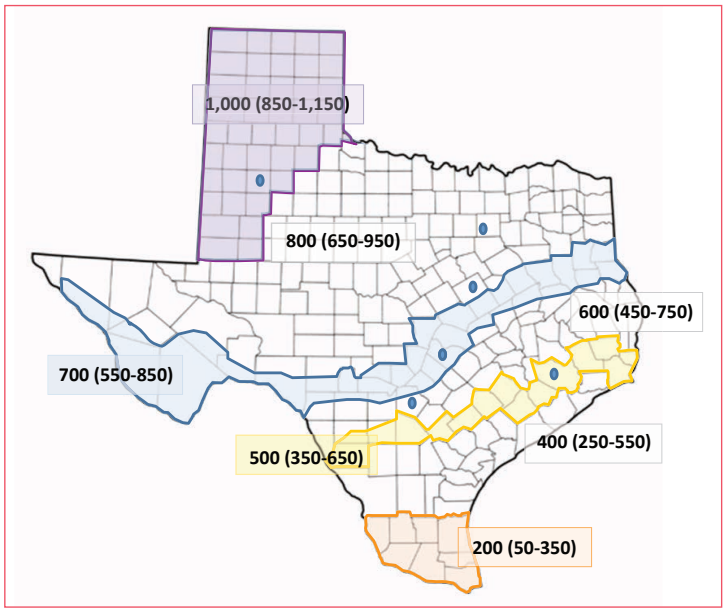

Figure 3. Average number of hours of winter chilling below 45° F in Texas.

Peach varieties are usually compared to others that have similar chilling requirements and that ripen in a given period. Because bloom and harvest times fluctuate widely across the state and between seasons, a calendar date cannot be

TABLE 1: Recommended peach varieties for Texas.

High-chilling varieties (700–1,000-hour zones)			
Variety	**Chilling requirement**	**Stone freeness**	**Days ripening before *'Elberta'***
'Flavorich'	700	Cling	64
'Regal'	700	Semi-cling	54
'Junegold'	650	Cling	46
'Surecrop'	1,000	Semi-free	42
'Juneprince'	650	Semi- free	35
'Sentinel'	850	Semi-free	34
'GaLa'	750	Semi-free	34
'Harvester'	750	Free	26
'Ranger'	1,000	Free	24
'Fireprince'	850	Free	20
'Cary Mac'	750	Free	20
'Topaz'	850	Free	18
'Majestic'	850	Free	16
'Redglobe'	850	Free	13
Cresthaven	850	Free	3
'Dixiland'	750	Free	3
'Redskin'	750	Free	2
			Days after *'Elberta'*
'Flameprince'	850	Free	14
'Parade'	850	Free	30
'Fairtime'	750	Free	35
Medium-chilling varieties (450–650-hour zones)			
Variety	**Chilling requirement**	**Stone freeness**	**Days ripening before *'Elberta'***
'Flordacrest'	425	Semi-cling	55
'Flordaking'	450	Cling	51
'Junegold'	650	Cling	46
'TexKing'	450	Cling	42
'Juneprince'	650	Semi-free	35
'Texstar'	450	Semi-free	32
'Southern Pearl'	650	Free	28

Continued on page 5

used to estimate when the fruit will mature.

Instead, standard varieties are used as benchmarks for relative ripening dates. Even though 'Elberta' is rarely grown these days, it is still the standard by which the maturity of high- and medium-chilling cultivars are measured. For low-chill varieties, the standards are 'Flordaking' and 'Flordaprince.'

Commercial varieties must be vigorous, consistently bear satisfactory yields, and have acceptable disease resistance. Fruit characteristics need to meet certain minimum quality standards as measured by color, firmness, flavor, shape, and size. As the season progresses, fruit quality typically improves.

For retail or pick-your-own marketed fruit, consider planting several varieties that ripen in sequence to extend the harvest over a 6- to 10-week season. Early peaches often bring premium prices due to a lack of competition from other areas. Late-season varieties typically have greater stone-freeness and higher quality but require more sprays, have significant out-of-state competition, and may ultimately be less profitable.

Rootstock selection

The type of rootstock greatly influences a peach tree's growth, productivity, and longevity. For sites with coarse soils, choose nematode-resistant rootstocks such as Nemaguard. Although peaches perform best on sandy soils, root-knot nematodes may pose problems in those areas.

For heavier, more alkaline soils where nematodes are not an obstacle, Lovell or Halford rootstocks offer fewer problems with iron and zinc uptake and are more cold hardy than Nemaguard.

Guardian rootstock, which was developed to overcome specific tree problems in the southeastern United States, has performed poorly in Texas and is not recommended.

You may need to contract with a commercial nursery to obtain the desired varieties on the correct rootstock. To get the number of rootstock/scion combinations you want, order 12 to 15 months before the anticipated planting date.

Orchard establishment

To prepare the orchard site, clear out the trees and underbrush, remove roots, and disk and smooth the area. If the site has been recently cleared of timber, consider rotating annual cover crops of grasses, legumes, or small grains and delaying planting 1 to 2 years after clearing to reduce the probability of *Armillaria* root rot or other soil-borne pathogens.

If a site has been in native or improved grasses, starting site preparation the year before planting will greatly reduce weed control problems once the orchard is planted. Disking once or twice during the early season should reduce annual weed populations. Applying a non-selective herbicide such as glyphosate will help reduce problems with perennial weeds such as bermudagrass and Johnsongrass.

The trees will perform better and live longer if you plant them on terraces for maximum soil drainage. While this practice is essential on shallow, poorly drained soils, the use of terraces improves tree performance even on the best of soils. Construct the terraces, or beds, to make the tops 12 to 18 inches higher than the row middles.

Continued from page 4

Medium-chilling varieties (450–650-hour zones)			
'TexRoyal'	600	Free	25
'Suwanee'	650	Free	22
'TexPrince'	550	Free	20
'La Feliciana'	600	Free	18
Low-chilling varieties (150–400-hour zones)			
Variety	**Chilling requirement**	**Stone freeness**	**Days before *'Flordaking'***
'Gulfking'	350	Cling	6
Variety	**Chilling requirement**	**Stone freeness**	**Days after *'Flordaking'***
'Flordacrest'	375	Cling	+4
'Gulfprince'	400	Semi-free	+25
			Days after *'Flordaprince'*
'FlordaPrince'	150	Cling	-0-
'TropicPrince'	150	Cling	+7
'TropicBeauty'	150	Semi-free	+14

Figure 4. Healthy nursery stock.

Spacing

Configure the orchard to reduce shading in the future and to make it easier for equipment passage. For irrigated orchards, the optimal spacing appears to be 22 to 24 feet between rows and 18 feet between trees.

For non-irrigated or non-cultivated orchards, spacing rows and trees 24 feet apart will allow for equipment passage through the orchard and give the tree more soil to draw from during drought. Researchers have tested higher-density peach spacing in Texas and in most cases it is not recommended.

Planting

For optimal success, plant the trees following these steps:

1. Buy healthy, vigorous nursery stock (Fig. 4) on appropriate rootstocks from a reputable nursery. Commercial orchards usually buy June-budded trees ranging from 2 to 4 feet tall. Ideal trees are 30 to 36 inches tall. Contact a nursery at least 1 year before planting to ensure the availability of desirable nursery stock.
2. When the nursery stock arrives, keep the roots from freezing or drying out by heeling the trees in soil: Open a trench, lay the trees at a 45° angle, cover the roots with soil, and water in the heeling bed.
3. Plant in December through early March while the trees are dormant. In Texas climates, planting early enables the roots to become established before bud break.
4. One hour before planting, trim the diseased or damaged roots and soak them in water.
5. Dig the planting holes large enough to accommodate the root system. Dig the hole to fit the root system; do not prune healthy roots to fit a smaller hole. You may prune roots that are diseased or damaged and cut back a few that are excessively long.
6. Plant the tree at the same depth as it was planted in the nursery. Firm the soil around the tree and water well to

help settle the soil and eliminate air pockets around the roots.

7. Prune the tree to a single trunk and cut it back to about 24 to 36 inches tall. For 1-year-old nursery stock, remove all the lateral branches flush with the trunk. For older stock, cut back the lateral shoots, leaving stubs to allow new buds to form scaffold limbs. Scaffold limbs are the primary branches arising from the trunk that form the tree's canopy.
8. Place a grow tube or aluminum foil on the lower 18 inches of the trunk, leaving the upper 6 inches of the trunk exposed (Fig. 5). This cover will help reduce sunscald, keep scaffold limb formation at an appropriate height on the trunk, and help in weed-control procedures the year of establishment.

To prevent trunk girdling in later years, remove **all** of the foil after the first growing season.

Figure 5. Cutting back at planting and aluminum foil wrapping of lower trunk.

Training

Within a few weeks after growth begins in the spring, select the strongest four or five shoots arising from the top 6 inches of the main stem. They should be evenly spaced along the trunk with at least one directed into the prevailing wind. Remove all other shoots along the trunks or limbs.

These few branches will grow vigorously for about 10 more weeks and then begin to lignify, or harden and turn brown, near the trunk. Maintain a healthy canopy with sufficient water, nutrients, and weed control throughout the fall to fully harden the new scaffold limbs and to maximize the young tree's winter hardiness.

First-year care

Weed control is critical in the first year; if left unchecked, weeds can drastically reduce the first year's growth. Most weeds remove water and nutrients from the soil more aggressively than can the newly set peach trees. Often these small trees can be seen standing in lush green grass with the telltale red spots of nitrogen deficiency on their leaves (Fig. 6). The trees will grow much bigger if weeds are controlled during the first year.

Figure 6. Lack of weed control causing poor tree survival, reduced growth, and orchard failure.

Figure 7. Early training of young tree to open center design.

Weeds can be controlled by mechanical methods such as tilling or disking and by chemical methods using herbicides.

The advantages of mechanical methods are that the trees will not be harmed by incidental herbicide contact and that cultivation can be performed by unskilled labor when available. Disadvantages include the number of cultivations required for adequate control and the extensive damage to tree roots if cultivation is too deep. To protect the roots, adjust the tillage equipment to cut no more than 3 inches into the soil.

Chemical weed control is more reliable and economical, does a better job of controlling perennial weeds, and usually does not have to be repeated as often.

Do not use glyphosate around first-year trees unless the trunk has been wrapped with aluminum foil as described earlier. Green bark can absorb the herbicide, which will damage the tree extensively. After the first season, the trunk bark will be better able to resist the uptake of herbicides.

Training to open-center system

Because they do not have an erect growth habit, peaches and other stone fruit are traditionally trained to an open center system (Fig. 7). This growth form is shaped like a martini glass and enables the tree interior to receive full sun exposure.

After the first growing season and when the young trees are fully dormant, prune back the tree to a trunk with three or four permanent scaffold limbs. If growth has been excellent in the first season, you can also establish sub-scaffold limbs about 24 inches from the crotch of the tree.

During the second growing season, the sub-scaffold limbs will continue to develop, and the tree will grow much larger. Under ideal conditions, peach trees can grow enough to bear fruit during the third growing season.

Peaches are borne only on 1-year-old wood, so in addition to gaining size and girth, the second-year tree will also be growing fruiting wood that will be responsible for the crop during the third growing season. Prune during the second dormant season to maintain and fully develop the open center form as well as to retain some 1-year-old wood for fruiting the following season.

Pruning

Pruning during the dormant season invigorates the tree, enabling it to develop a healthy canopy to produce the current

season's crop and to improve the potential for production in the following year.

Pruning benefits the trees and the orchard by:

- Keeping the tree center open to enable air to circulate and light to penetrate
- Partially controlling crop size when fruiting wood is thinned selectively
- Lowering the fruiting zone to a height that enables the peaches to be hand-harvested from the ground; if the trees are topped at 7 or 8 feet, the weight of the crop will bring the limbs down where the fruit can be easily reached
- Removing dead or diseased shoots, rootstock suckers, and vegetative water sprouts (excessively vigorous growth) from the center of the tree (Fig. 8).

Figure 8. Winter appearance of open center tree.

When thinning out fruiting wood, remove old, gray, slow-growing shoots that are not fruitful, and leave 1-year-old, red, 18- to 24-inch bearing shoots (Fig. 9).

Peach pruning normally removes about 40 percent of the tree each winter. This practice reduces the number of fruit on the tree and stimulates strong growth of a healthy canopy to ripen the branches that ultimately become fruiting wood for the following year.

Pruning early in the year provides "insurance" against crop loss by removing many of the flower buds. The peach tree will bloom soon after pruning when the chilling requirement is satisfied and warm weather follows.

Growers with only a few trees can wait to prune until the pink bud stage, which is when the flower petals have elongated and start to emerge from the green sepals. Larger orchards are traditionally pruned as late as possible in the spring while still allowing enough time to complete the task before the trees leaf out.

Pruning mature peach trees

A key to a long peach tree life is proper pruning. It often takes 20 to 30 minutes to prune a mature peach tree correctly:

1. Remove all hanger shoots, rootstock suckers, and water sprouts in the lower 3 feet of the tree. This removal allows air to circulate and clears a path for herbicide applications.
2. Remove all shoots above 7 feet high other than the red 18- to 24-inch fruiting shoots. Make the cuts where the scaffold and sub-scaffold limbs extend upward at a 45- to 50-degree angle from the trunk. Avoid cuts that leave limbs

Figure 9. Peach tree pruning.

sideways at a 90-degree angle.

3 Remove all water sprouts that grow toward the inside of the tree. These should be removed anytime they develop. Pruning them immediately after harvest in the summer will reduce shading in the prime fruit-bearing area of the tree.

4 Remove all old gray wood in the 3- to 7-foot production zone.

Fertilization

To the keep trees healthy and productive, maintain nutrient levels in the optimal range. The only accurate way to know what nutrients are needed is to have the soil and foliage tested.

Soil tests determine the initial nutrient needs and can help you maintain the soil pH in the desired range. An easy way to raise soil pH levels is to apply lime; however, it is extremely difficult to lower pH levels in calcareous soils.

Leaf analysis will reveal whether the tree has drawn the needed nutrients from the soil. To correct low micronutrient levels, make foliar and/or chelate applications; to increase macronutrients, apply them to the ground.

Have samples of leaves tested once or twice a year, following these guidelines:

- Collect the samples between July 15 and August 15.
- Select trees randomly across a block and include 50 to 60 leaves per sample.
- To help identify a limiting element, take samples of tree leaves in problem areas separately from those of "normal" trees.
- Take two or three leaves from the middle of the tree.
- Choose current-year shoots that are vigorous, bearing fruit, and well exposed to the sun.
- The leaves should be fully mature, from new growth, and well exposed to sunlight.

Instructions for collecting and submitting samples are available online at http://soiltesting.tamu.edu/ and at county A&M AgriLife Extension offices.

Have the soil tested every 3 to 5 years to monitor soil pH and soil nutrient levels. Soils with a pH above 7.8 usually cause major deficiencies of micronutrients, especially iron and zinc. To help overcome these site limitations, choose appropriate rootstocks and apply chelated nutrients as needed.

Young trees grow best with small, frequent fertilizations. Newly planted fruit trees can be fertilized the first year if they make 8 to 10 inches of growth by May. If so, spread 1 cup of nitrogen fertilizer (ammonium sulfate or nitrate) at least 18 inches away from each tree.

Be extremely careful not to place fertilizers any closer to the trunk. Fertilizers are salts that can burn roots and kill young trees. Because some organic sources of nitrogen also contain high salt levels, know the material you are applying.

Fertilize the second-year trees four times, in March, April, May, and June. If the soil pH is below 7.8, the first application can be a 3-1-2 ratio fertilizer; if above 7.8, use only nitrogen. Apply 1 cup of fertilizer at the first of each month. In the third year, apply 2 cups of fertilizer at the first of each prescribed month.

When following this fertilization pattern, if the trees do not continue growing from month to month, stop fertilizing. Fertilize only if there is active growth.

Once the peach trees are in full production—usually in the fourth growing season—apply phosphorus and potassium according to soil and or leaf tissue test recommendations. Most orchards with mature peach trees require 50 to 60 pounds of actual nitrogen (N) per acre per season. Typically, one half of this application is applied just after fruit set.

Ammonium nitrate is 33 percent nitrogen; ammonium sulfate is 21 percent actual nitrogen; calculate pounds of fertilizer on that basis. Apply fertilizer again in May and June to keep the canopy healthy throughout the summer.

Although nitrogen is traditionally broadcast across the entire floor of a mature orchard, its movement into the root zone will be inhibited in hot, dry weather. Many growers have overcome this problem by making summer nitrogen applications through drip irrigation systems. Using this approach, you can be sure that small, frequent doses will be available to the tree immediately.

Irrigation

Do not plant a peach orchard on a site without suitable water irrigation, in quantity or quality. Before establishing an orchard, have the water analyzed for pH, total soluble salts (EC), sodium absorption ratio (SAR), and bicarbonate and carbonate content.

Design the irrigation system to apply up to 50 gallons of water per tree per day.

Table 2 lists recommendations on the amount of water to

TABLE 2: Gallons of water needed per week for 1- and 2-year-old peach trees

Year	April	May	June	July	Aug	Sept
1	7	7	14	28	28	21*
2	14	14	28	56	56	28*

*Applying supplemental irrigation in September and October may be unnecessary if seasonal rainfall arrives.

drip-irrigate young peach trees. Adjust these amounts for soil type and weather conditions. After the second year, each tree will need the equivalent of 1 inch of water per week if no rain falls.

Fruit thinning

Most peach varieties set far more fruit than can be grown to large size with good quality. Thin to control the number of fruit per tree, to increase fruit size and quality, and to ensure adequate leaf growth in the trees. The prices of large fruit are usually at least twice those of small fruit, and large fruit are more economical to harvest.

The earlier that fruit is thinned from a tree, the bigger the remaining fruit will grow. Although ideally you would thin early-ripening varieties during bloom, the risk of frost generally dictates that you wait until shortly after fruit set. In general, thin the fruit within 4 to 6 weeks after bloom and in order of ripening.

Thin the fruit to 6 to 8 inches apart along the fruiting branches, which generally leaves about 600 fruit per mature tree.

Figure 10. Hand-thinning of developing fruit.

The only fully proven thinning methods available are by hand (Fig. 10) and by machine. The advantages of hand thinning are that it is the most precise method and it enables growers to select the desired fruit position more carefully. However, hand thinning can cost up to $250 per acre, which is more expensive than mechanical thinning.

Mechanical thinning by shakers can be successful if done carefully. The major drawbacks are that the shakers tend to damage the trees if used improperly, and that growers must wait for the fruit to get large enough to be

shaken off. This limits the usefulness of machine thinning on early-ripening varieties.

Researchers are seeking ways to best use mechanical thinners to adjust crop load.

Weed control

Weeds must be controlled, especially for first- and second-year trees. Irrigation and fertilization cannot overcome the ill effects of severe weed competition.

In the past, weeds were controlled by disking and hand hoeing, but this method causes irreplaceable topsoil to be lost to erosion. Another disadvantage is that cultivating orchards makes it more difficult to move equipment through the orchard in wet weather.

For most orchards, the most efficient floor management system is to maintain a weed-free strip under the trees and mown native sod between the rows. In this system, weeds under the trees are controlled with chemicals or mulch. Gradually widen the weed-free strip, from 3 to 4 feet in a first-year orchard to 10 to 12 feet in a mature orchard.

Applied properly, chemicals can manage weeds more effectively, for longer periods, and at lower cost. However, they can damage the trees if used improperly. When applying herbicides, follow all product label instructions carefully

Insects and diseases

Many insects and diseases damage peach trees and fruits in Texas. Major pests include catfacing insects, peach twig borer, plum curculio, San Jose scale, and greater and lesser peach tree borers. In some cases, you can use traps to monitor the presence and damaging levels of insect populations.

Serious diseases are bacterial spot, brown rot, cotton root rot, post-oak root rot, and scab. Although Far West Texas has fewer insect and disease problems, they are enough to warrant control measures.

For commercial and homeowner spray schedules, contact your county A&M AgriLife Extension office.

Harvesting and handling

Peaches will begin bearing a commercial crop in the third or fourth year. Texas-grown peaches are consumed primarily within the state and are harvested by hand. Consumers demand dessert-type peaches that are ready to eat when purchased.

Figure 11. High-quality, tree-ripened fruit.

Growers must therefore harvest fruits that are at a mature stage, and harvest and handle them carefully.

Harvest the fruit when they are firm-ripe and well colored with a red blush over yellow background (Fig. 11). Fruit harvested at this stage ripen properly and have excellent eating quality.

Several types of containers are used for picking and hauling fruit, including half-bushel baskets, drop-bottom picking bags, wooden boxes, and plastic containers.

Plastic containers are about half-bushel size and are especially adapted for handling more mature fruit. They may be stacked several feet high on trailers without damaging the fruit. Pads on the bottom of these containers help reduce fruit damage. Bruising is also lessened because the same container is used for both picking and hauling operations.

Larger operations can use 18-bushel pallet boxes to haul fruit to packing houses.

Methods of handling harvested fruits vary among growers:

- Many growers own or have access to packing house facilities for washing, defuzzing, grading, packing, and storing fruits.
- Hydro-cooling to remove field heat is valuable for fruits that must be transported far or held in cold storage for long periods.
- Cold-storage facilities benefit peach profits tremendously. Harvested fruits can remain in good condition for about 2 weeks if refrigerated at 32° to 35° F. Refrigeration also reduces rots, which permits the grower to accumulate surplus fruits and market them systematically

Marketing

Today's market demands that the peaches be large—preferably 2¼ inches or more in diameter—free of insect and disease blemishes, and attractive, with good shape, color, and maturity.

Texas produces less fruit than is consumed within its borders. Growers near major metropolitan areas can take advantage of these prime markets without having to haul fruit far. Although competition from other states is keen, locally grown fruit bring premium prices.

Most peaches grown in the state are marketed by the individual grower. Outlets can include local supermarkets, packing shed

operators, roadside stands, brokers and wholesalers, and orchards for direct sales (Fig. 12).

Many growers market most of their crop retail because of greater profits. For these sales, many growers use peck, half-peck, or smaller containers. For wholesale markets, the standard containers are half-bushel cardboard boxes.

Figure 12. Selling peaches at the farm gate.

Cost and returns

Production costs and returns depend on the nature and size of the operation. Orchards begin bearing commercial crops by the third season and usually remain profitable for 12 to 15 years. In some well-maintained orchards, 25-year-old trees are still bearing and profitable.

Reasonable average gross returns during this period are $3,000 per acre when fruit is wholesaled. Net income varies by season, attention to cultural management, and marketing. Net returns are considerably higher for growers who market their fruit through retail outlets.

For more information

http://aggie-horticulture.tamu.edu/fruit-nut

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