

**Home Fruit Planting Guide** 

David A. Hillock Extension Consumer Horticulturist

#### B. Dean McCraw

Extension Tree Fruit and Pecan Specialist

A home fruit planting carefully selected, properly located, and well managed can enhance the home landscape, provide high-quality fruits and serve as a satisfying hobby.

The home fruit garden requires considerable care. Thus, people not willing or able to devote some time to a fruit planting will be disappointed in its harvest.

Some fruits require more care than others do. Tree fruits and grapes usually require more protection from insects and diseases than strawberries and blackberries. Generally speaking, flowers and fruits of fruit trees must be protected by pesticide sprays from before blossom-time until harvest. In addition, sprays may be required to protect leaves, the trunk, and branches.

Small fruits are perhaps the most desirable of all fruits in the home garden since they come into bearing in a shorter time and usually require few or no insecticide or fungicide sprays.

Fresh fruits can be available throughout the growing season with proper selection of types and cultivars (varieties).

# Soils and Sites

Avoid poorly drained areas. Deep, sandy loam soils, ranging from sandy clay loams to coarse sands or gravel mixtures, are good fruit soils. On heavier soils, plant in raised beds or on soil berms to improve drainage.

All fruit crops are subject to damage from late spring freezes. Hills, slopes or elevated areas provide better air drainage and reduce frost damages. Make certain that the air can move freely throughout the planting site and is not "boxed" in with surrounding terrain or tree borders.

Heat from houses, factories, and other structures in urban areas frequently keep the temperature 4 or 5 degrees warmer than surrounding rural areas.

Fruits do best in full sun. They can tolerate partial shade, but fruit quality will be lowered.

### Size of Planting Area

Plan the planting to fit the area involved as well as family needs. A smaller planting, well cared for, will usually return more quality fruit and enjoyment to the grower than a larger neglected one. One-half acre or less planted to adapted cultivars of the best kinds of fruit is usually adequate for the average family. Oklahoma Cooperative Extension Fact Sheets are also available on our website at: http://www.osuextra.com

### **Plan Your Planting**

Develop a planting plan well in advance of the planting season. Determine the kinds of fruits, cultivars, and quantities of each needed. Locate a source of plants and make arrangements for plants to be available at the desired time of planting.

Perennial weeds such as bermudagrass and johnsongrass compete heavily with young plantings and should be eliminated before planting. This can be done by spraying with a post-emergence herbicide such as glyphosate (Roundup‰) in late summer the year before planting or by shading out weeds by growing hybrid sudangrass for the year prior to planting.

Strawberries especially should not be planted in newly turned under bermudagrass sod. Not only will the bermudagrass regrow and cause extreme competition problems because of the short height of the strawberry plants, but the white grubs that frequently infest bermudagrass sod can destroy the strawberry roots.

For best survival and production, supplemental water should be provided in the summer. Locate your plantings near a water source.

# Planting

If possible, set the plants immediately after arrival. If roots are dry, completely immerse the roots in water for a few minutes or overnight before planting. Always water plants immediately after planting.

Never allow the roots to dry out or freeze. When planting is delayed several days, heel in trees by forming a mound of loose soil or mulching material. Place the roots into this mound, cover them, and moisten. The trees may be vertical or horizontal as long as the roots are covered. This protects them from drying or freezing.

Set trees about the same depth that they grew in the nursery row. Trim off broken and dried roots. Place topsoil around the roots and firm the soil to exclude air. Settle the soil with water and make sure the roots are left in a natural outward position. Leave a small basin one or two inches deep around the tree to aid in watering. Prune back about one-third of the tree top. Wrap the trunk from the soil line up to the first branches (or 18 inches above the ground) to protect the trunk from sunscald, rodent injury, insect damage, and drying out.

# **Cultural Practices**

During the first summer, cultivate or mulch around the fruit plants to reduce competition from other plants and to conserve moisture and fertility. Irrigation is especially important in the first few years while the planting becomes established.

Information on pruning, spraying, and other cultural practices is available at your local county Extension office.

## Pollination

Pay close attention to the pollination requirements of the different fruits to avoid disappointment. Many fruits require that the flower is pollinated with pollen from a different cultivar of the same fruit or the fruit will not develop. Planting only one cultivar of these fruits often results in masses of blooms in the spring, but few or no fruits. Different strains of the same cultivar (e.g. two spur strains of 'Delicious') will not provide proper cross-pollination.

There are a few cultivars of apple and pear that do not produce viable pollen. If one of these cultivars is planted, two other cultivars will need to be planted (a total of 3) to provide adequate pollen for all. Sometimes some apple cultivars are listed as self-fertile in nursery catalogs, but for consistent production of the best quality fruit, cross-pollination with another cultivar should always be provided.

Duke cherries are hybrids between sweet and sour cherries. They can be cross-pollinated by either sweet or sour cherries, but Duke cherries should not be counted on to cross-pollinate sweet cherries.

All fruits in the accompanying table that are not marked as requiring cross-pollination are self-fertile, meaning that a cultivar of those fruits can set fruit with its own pollen.

Highbush blueberries will set much better crops if cross-pollination is provided. Rabbiteye blueberries require cross-pollination. Highbush and rabbiteye blueberries will not pollinate each other.

### **Dwarf Trees**

Dwarfing rootstocks enable fruit trees to be grown in much smaller areas than standard-sized trees. The term 'dwarfing' refers to a tree smaller than when grown on seedling rootstocks, even if only 10 to 15 percent smaller. The degree of dwarfing varies with the rootstock. In general, semi-vigorous rootstocks will produce a tree about 3/4 the size of a standard tree, semi-dwarf about 1/2 sized, and fully dwarfing rootstocks produce trees 1/3 of standard size or smaller.

Genetic dwarf fruit trees are available but generally are not satisfactory. 'North Star' sour cherry is an exception.

# **Types of Fruit**

**Apples**—M.9 and M.27 rootstocks produce fully dwarfed trees (6-8' tall and 4-6' tall respectively). Both produce shallow, weak root systems and require staking or trellising, and regular watering. Dozens of other size-reducing apple rootstocks exist, but the best for Oklahoma is MM.111. MM.111 will produce a tree that is 25 percent smaller than on seedling rootstock, but very well anchored and drought resistant.

Interstem trees, with a MM.111 root system, 8 to 10 inches of trunk of M.9 or M.26 and with the fruiting cultivar grafted on top combine the anchorage of the MM.111 with the dwarfing of M.9 or M.26 to produce a tree 8 to 10 feet tall that will not need support. Interstem trees are more costly and less available than single graft trees.

Spur-type strains of apple cultivars have more spurs and fewer long branches than the non-spur strains. They are smaller growing and preferred where available.

**Pear**—Quince is the standard dwarfing rootstock for pears, but will require support. Quince rootstocks are less cold hardy than pear, and are very susceptible to fireblight. Quince C is the most dwarfing, producing a 1/4 to 1/3 size tree. A new series of pear rootstocks, the OHXF series (from a cross between 'Old Home' and 'Farmingdale'), is entering the nursery trade, and offers a variety of tree sizes from 1/4 to 3/4 standard size.

Pears are very susceptible to the bacterial disease, fireblight. Only cultivars with known resistance to this disease should be planted. Even with blight resistant cultivars, pruning out infected shoots 12-18 inches below the infection as soon as they appear will be necessary to prevent disease buildup. Pruning shears should be sterilized between cuts. More information on fire blight control is available at your local county Extension office. The 'Magness' cultivar should be planted with two additional cultivars since it does not produce viable pollen.

**Peach**—There are no satisfactory dwarfing rootstocks for peach at present; however, 'Halford' or 'Lovell' are good choices. *Many nurseries use Prunus besseyi seedlings*, but often there is delayed graft incompatibility and tree death. Tree height on peaches can be kept to 6-8' by judicious annual pruning. Well-drained, deep, open-type soils of reasonable fertility are preferred. A spray program for insects and diseases beginning with a dormant application and continuing through fruit growth is required to produce clean fruit. Peach tree borer control is a necessity.

**Plum**—There are no satisfactory dwarfing rootstocks at present for plums. General cultural requirements are similar to peaches. The Japanese plums bloom earlier than the European types and are more subject to late spring frost damage. European and Japanese plums should not be depended upon to pollinate each other.

**Cherry**—There are no satisfactory dwarfing rootstocks at present for cherries. Many sweet cherries are not adapted to a hot, dry climate. Cherry leaf spot, plum curculio and poorly drained soils are the major obstacles to successful cherry production in Oklahoma. The diseases and insects can be controlled successfully with a series of sprays. Sour cherries are generally better adapted than sweet cherries. Sweet cherries in general require cross-pollination; but two cultivars, 'Stella' and 'Lapins', are self-fertile.

**Apricot**—There are no satisfactory dwarfing rootstocks at present for apricot. Apricots bloom early and are usually killed by late spring frosts. The tree is very ornamental when in bloom, and tree-ripened apricots are delicious, but do not expect consistent production.

**Strawberry**—Strawberry roots are usually found in the 12 to 18 inch top layer of the soil. Most of the root system is in the first 6 to 8 inches of soil. This stresses the importance of

supplemental irrigation and mulching for this crop. For continued good production, strawberry plantings should be renovated each year after harvest. Purchase virus-tested plants only. A production of one to two quarts of berries per three foot section of row should be possible each year.

**Blueberries**—Blueberries require a soil pH of 5.0 to 5.2. Highbush blueberries are best adapted to northeastern Oklahoma. They will do best when protected from hot, drying winds. Rabbiteye blueberries are best adapted to southeastern Oklahoma. Highbush blueberries must have supplemental irrigation and mulch of woodchips, sawdust or pecan shells to survive. Rabbiteye blueberries also need irrigation and will benefit from mulch.

**Raspberries**—Raspberries, generally, are not too productive because of the fluctuating temperatures during winter. Black raspberries, if well watered and mulched, can be successful.

Blackberries—Erect thorny blackberries are the most commonly grown and do not require trellis support. Care must be taken to maintain the rows no more than one to two feet wide to facilitate harvesting. Sucker plants that come up between the rows may be dug and moved into the row or merely removed as soon as they emerge.

Trailing thornless blackberries have smooth, arching canes, and require support on a trellis. Fruit quality is improved if the fruit are allowed to ripen to a dull black rather than a glossy black color.

**Grapes**—Grapevines will require support on a trellis, arbor or fence. Planting in north-south rows will increase production. Some protection from southwestern winds is desirable. Occasional supplemental watering during the fruit ripening period will improve fruit quality. Annual pruning is necessary to maintain a balance between plant growth and fruit production. It is common to remove 95 percent of the previous season's growth when pruning.

**Persimmon**—Oriental persimmon trees will bear fruit without pollination. Oriental and American persimmon trees will not cross-pollinate. Oriental persimmons may not be winter hardy in northern parts of Oklahoma.

Kind	Suggested Varieties* * *	Season of Harvest Central Oklahoma or adapted areas	Remarks	Suggested Planting Distance In Feet	What to Buy	When to Plant
APPLES	* Lodi	June 25-July 6	Yellow, soft, cooking only.	Standard 25 to 30		Ę
			-	or 0 : 0: 1 : 10: 0-	One year old	Fall 6 ·
	* McLemore	July 10-July 25	Red, dessert and cooking	Semi-Standard 18 to 25	trees	or Spring
	, Gala	Aug 10-20	Urange-red, dessert only.	or		
	* Jonathan	Aug 25-Sept 10	Red, dessert & cooking.	Semi-dwarf 15 to 20		
			Very susceptible to fireblight	Spur-Types 15 to 22		
			and cedar-apple rust.	or		
	<ul> <li>* Delicious (red)</li> </ul>	Sept 1-10	Red, dessert only.			
	Liberty	Sept 1 -10	Red, dessert and cooking			
			very disease tolerant			
	Freedom	Sept 1 -10	Red, dessert and cooking			
			very disease tolerant			
	Arkansas Black	Sept 10-20	Purplish-red with yellow flesh,			
			dessert and cooking,			
			tolerant to cedar apple rust			
	* Golden Delicious	Sept 10-20	Yellow, dessert & cooking.	Dwarf 8 to 14		
			Well adapted.			
	* Braeburn	Sept 10-20	Orange/red blush over yellow,			
			dessert and cooking			
	* Fuji	Sept 10-20	Yellow, dessert and cooking			
PEACHES	Candor	June 18-24	Yellow, semi-clina	20x20	June bud trees	Fall
	Santinal	line 28- luly 3	Vallow fraestone		from the soluth	or Spring
			Vollow, fractions			
	Doligooo					
	Lellal Ice					
	Hanger		Yellow, treestone		trom the north	
	Glohaven	July 15-20	Yellow, treestone			
	Nectar	July 15-20	Yellow, freestone			
	Jayhaven	July 21-27	Yellow, freestone			
	Cresthaven	July 28-Aug 3	Yellow, freestone			
	Autumnglo	Aug 6-10	Yellow, freestone			
	Quachita Gold	Aug 13-17	Yellow, freestone			
	White Hale	Aug 13-17	Yellow, freestone			
	Starks Encore	Aug 20-25	Yellow, freestone			
	Fairtime	Sept 13-20	Yellow, freestone			
NECTARINES	EarliBlaza	-111/v 3-0	Vallow sami-fraestone	00/00	line hid trees	Fall
	Dodobiof		Mhito franctana	LOXED	from the courth	or Chrine
	Cavaliar	10-20 July 10-20	VIIIIE, ITEESIUIE Vallowi fraastona		or dormant hud	
	Sundlo	Inthy 27-Ann 2	Vallow, freestone		(nne vr.) trees	
	BadGold		Vallow freestone		from the north	
	5					

**OKLAHOMA HOME FRUIT PLANTING GUIDE** 

One year old Fall trees or Spring	One year old Fall trees or Spring	One or two Fall year old trees or Spring	One year old Fall or Spring trees	One year Fall old trees or Spring	One year Fall old plants or Spring	One year old Fall or root cuttings early spring	One year old Fall or Spring root cuttings Early Spring Tip layers Early Spring One year old Fall or Spring
20x20	20x20	20×20	20x20	25x25	2x4	3X8	2011). 3.28 3.28 8.212 8.212 8.212
A prune plum, self-fruitful Stanley x President cross	Large, late ripening Red flesh, partly self-fruitful Very productive, self-fruitful Large, yellow flesh	The standard of sour or pie cherry,very consistent Duke cherry (semi-sweet) The standard of sour or pie cherry, very consistent Sour or pie Sour or pie Sour or pie (resistant to leaf spot) Sweet (self-fertile)	Commercial production should not be attempted	Fireblight resistant Fireblight resistant Fireblight resistant	Incorporate organic matter ahead of planting strawberries; select virus indexed plants	Very sweet Very sweet Large very sweet Medium large, very sweet Latest ripening, high yields Good flavor Southerm only	Sweet Sweet Trellis or other support required Trellis or other support required6x10
Aug. 20-Sept. 10 Sept 1-15	Sept 10-20 June 15-25 Aug. 10-20 Aug. 10-20	May 20-June 1 May 22-June 5 June 3-15 June 5-20 June 5-20	June 25-July 5	Aug 10-Aug 25 Aug 25-Sept 5 Sept 5-Sept 15	May 5-June 5 May 5-June 5 May 10-June 10 May 10-June 10 May 10-June 10 May 15-June 15 May 15-June 15	July 1-10 July 1-10 July 10-30 July 10-30 July 10-30	July 20-00 July 20-Aug 5 July 10-30 July 1-20 July 20-Aug 5
	* President * Methley Bruce * Ozark Premier	Early Richmond * Kansas Sweet Montmorency Northstar Meteor Stella	Tilton	* Moonglow * Maxine ** Magness	Earliglow Sunrise Attas Allstar Cardinal Delite Marlate	t) Choctaw Womack Cheyenne Cherokee Shawnee Rrazos	
PLUMS (European)	(Japanese)	CHERRIES	APRICOTS	PEARS	STRAWBERRIES	BLACKBERRIES (Erect)	(Erect Thornless) (Trailing) (Trailing Thornless)

Spring					Fall or Spring	Early Spring		Spring	Spring	Spring	Fall or Spring	Fall or Spring	
One or two					One year old vines	12" to 18" well rooted plants		One or two year old trees	One or two year old trees	One year old trees	One or two year old trees	One or two year old trees	aties.
8x10					ss 14x10	4x6		15 to 18	12 to 15	8 to 10	18 to 20	20 to 25	d apple and peach varie
Red, table-seedless White, wine type	White, wine type	White, wine type Blue, wine and juice Red, wine and table Red, wine and table White, table	Hed, table White, table-seedless White, seedless Rue table and inice	White. table and juice White. table and juice Blue, juice, for southwest Okla. Red. table seedless	Aug 15 Red, juice, jam, seedless Aug 15 Blue, table, juice, jam, wine, seedless Adapted for McCurtain and Choctaw counties only. Variety information available upon request.	Soil must be quite acid (pH 5.0). May require sulfur to change		For pollination, a male tree (pollen bearing) should be included in the alasting or should a male	branch into a female tree branch into a female tree Non-astringent when fully ripe Astringent Astringent	For milder southern counties; have been grown in protected areas of Tulsa and Okla. City	Used as sweet pickles, preserves, dried confections and fruit butter	Jelly and spice Jelly and spice	Needs cross pollinator. Those cultivars not marked with an asterisk are self-fertile. **Pollen sterile ***Space does not permit listing of other satisfactory varieties. OSU Extension F-6210 contains additional recommended apple and peach varieties.
July 15 Aug 1	Aug 8	Aug 18 Aug 10 Aug 15 Sept 1 Aug 10	Aug 1 Aug 20 Aug 15	Aug 20 Aug 22 Aug 15	Aug 15 Red. juice, jam Aug 15 Blue, table, juic Adapted for McCurtain and Choctaw counties only. Variety information ava upon request.	June 5-June 19 June 7-June 21 June 12-June 28 June 15-July 1	July 5-July 19 July 10-July 30 July 20-Aug 3	September	November November November November	July to frost Aug. to frost	September September	August August	d with an asterisk are se ry varieties. OSU Extens
Venus Aurora (S 5279) Source Blond	Seyval blartc (SV 5276) Villard Blanc	(SV 12-375) Rougeon (S 58908) Delaware Catawba Verdelet (S 9110)	J.S. 10-104 Romulus Himrod Fradonia	Niagara Carman Saturn	Reliance Mars (Muscadine)		(Rabbiteye) Premier Climax Tifblue	ION (American) Early Golden	Huchiya Fuyugaki Tamopan Tanenashi	Ramsey (Texas Everbearing) Brown Turkey	Lang Li	Florence Dolgo	"Needs cross pollinator. Those cultivars not marked with an asterisk are self-fertile. **Pollen sterile ***Space does not permit listing of other satisfactory varieties. OSU Extension F-62
GRAPES (Bunch)						* BLUEBERRIES	ĸ	PERSIMMON (American)	(Oriental)	FIG	JUJUBE (Chinese Date)	CRABAPPLES	*Needs cross pollinator. **Pollen sterile ***Space does not permit

# The Oklahoma Cooperative Extension Service Bringing the University to You!

The Cooperative Extension Service is the largest, most successful informal educational organization in the world. It is a nationwide system funded and guided by a partnership of federal, state, and local governments that delivers information to help people help themselves through the land-grant university system.

Extension carries out programs in the broad categories of agriculture, natural resources and environment; family and consumer sciences; 4-H and other youth; and community resource development. Extension staff members live and work among the people they serve to help stimulate and educate Americans to plan ahead and cope with their problems.

Some characteristics of the Cooperative Extension system are:

- The federal, state, and local governments cooperatively share in its financial support and program direction.
- It is administered by the land-grant university as designated by the state legislature through an Extension director.
- Extension programs are nonpolitical, objective, and research-based information.

- It provides practical, problem-oriented education for people of all ages. It is designated to take the knowledge of the university to those persons who do not or cannot participate in the formal classroom instruction of the university.
- It utilizes research from university, government, and other sources to help people make their own decisions.
- More than a million volunteers help multiply the impact of the Extension professional staff.
- It dispenses no funds to the public.
- It is not a regulatory agency, but it does inform people of regulations and of their options in meeting them.
- Local programs are developed and carried out in full recognition of national problems and goals.
- The Extension staff educates people through personal contacts, meetings, demonstrations, and the mass media.
- Extension has the built-in flexibility to adjust its programs and subject matter to meet new needs. Activities shift from year to year as citizen groups and Extension workers close to the problems advise changes.

Oklahoma State University, in compliance with Title VI and VII of the Civil Rights Act of 1964, Executive Order 11246 as amended, Title IX of the Education Amendments of 1972, Americans with Disabilities Act of 1990, and other federal laws and regulations, does not discriminate on the basis of race, color, national origin, gender, age, religion, disability, or status as a veteran in any of its policies, practices, or procedures. This includes but is not limited to admissions, employment, financial aid, and educational services.

Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Robert E. Whitson, Director of Cooperative Extension Service, Oklahoma State University, Stillwater, Oklahoma. This publication is printed and issued by Oklahoma State University as authorized by the Vice President, Dean, and Director of the Division of Agricultural Sciences and Natural Resources and has been prepared and distributed at a cost of 20 cents per copy. 0307 GH.