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SP307-H-Home Fruit Tree Plan

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Agricultural Extension Service
The University of Tennessee
SP307-H

Fruits and Nuts

Home Tree Fruit Plan

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Many types of fruits may be grown in Tennessee. However, not all of them will grow and fruit consistently in all parts of the state. Furthermore, differences in adaptability among varieties of the same type of fruit exist. Ideas concerning types and varieties of fruits adapted to your area can be found at your county Extension office, local nurseries and garden centers and from commercial and home fruit growers in your area.

Whenever possible, select varieties having resistance to diseases and/or insects. Problems and costs associated with production may be reduced considerably compared to those having no pest resistance.

Successful fruit production on a commercial or hobby scale is dependent on attention to numerous management practices, beginning prior to setting trees and extending up to the time the planting is removed. Site selection and preparation, type of fruit, variety/rootstock combination, planting technique, pruning and training, nutrition and pest control are just some of the factors involved. Deficiencies in one area may not be overcome by stressing other areas.

This factsheet will aid in determining the type of fruit tree to plant, size and potential longevity of the tree, yield per tree and numerous other points. It is one in a series of factsheets that address tree fruit production for the non-commercial grower. A listing of factsheets in the "Fruits and Nuts" series appears on the last page.

The table lists many factors to be considered. Understandably, the figures regarding age to first crop, age to full production, yield per tree at maturity and productive lifespan are approximations. Weather factors, site limitations and cultural practices all will have tremendous impact on tree performance.

Notes concerning each crop are on the back page. Information in them will be of further use in determining numbers of trees to plant and how to care for them.

Additional factsheets in this series as well as other information concerning tree fruit production in Tennessee are available at your county Extension office.



CROP	ROOTSTOCK	TRAINING SYSTEM	SPACING	
			In Row	Between Row
APPLES	Dwarf: Malling 9 Malling 26	 slender spindle slender spindle	 4 ft. 6 ft.	 12 ft. 14 ft.
	Semi-Dwarf Malling 7 (A) MM 106 MM 111	 central leader central leader central leader	 8 to 10 ft. 16 ft. 16 ft.	 16 to 18 ft. 24 ft. 24 ft.
	Standard: Seedling	 modified central leader	 20ft.	 30ft.
PEARS	Dwarf Standard	central leader central leader	10ft. 20ft.	18ft. 30ft.
PEACH, NECTARINE	Standard: Lovell or Halford	 open center	 16 to 20 ft.	 20 to 24 ft.
PLUM	Standard: Myrobalan Peach (Lovell, Halford)	 open center	 16 to 20 ft.	 20 to 24 ft.
TART CHERRIES	Standard: Mazzard, Mahaleb	 open center	 16 to 20 ft.	 20 to 24 ft.
SWEET CHERRIES	Standard: Mazzard, Mahaleb		 20 ft.	 25 to 30 ft.
QUINCE	Standard - Angiers Quince or rooted cuttings	 open center	 15 ft.	 15 ft.
PAWPAW	seedling (rooted cutting) or start from seed	natural	30 ft.	30 ft.
MULBERRY	rooted cuttings, seed	natural (varies from large shrub to a fairly large tree)	15 ft.	15 ft.
PERSIMMON	own root (American) grafted onto American rootstock (Oriental)natural	natural	10 ft. 10 ft. 10 ft.	10 ft. 10 ft.

Figures given are approximate values. They will vary depending on soils, cultural practices, climatic conditions (rainfall, temperature extremes).

AGE TO 1ST CROP	AGE TO FULL PRODUCTION	YIELD/TREE AT MATURITY	PRODUCTIVE LIFESPAN	NOTES
2 to 3 yrs. 2 to 4 yrs.	3 to 4 yrs. 4 to 5 yrs.	1 to 1 1/2 bu. 1 1/2 to 2 1/2 bu.	12 to 15 yrs. 12 to 15 yrs.	1, 2, 3
3 to 4 yrs. 3 to 4 yrs. 4 to 5 yrs.	4 to 6 yrs. 5 to 7 yrs. 6 to 8 yrs.	2 to 4 bu. 5 to 8 bu. 5 to 8 bu.	15 to 20 yrs. 20 to 25 yrs. 20 to 25 yrs.	1, 3
4 to 6 yrs.	10 to 12 yrs.	8 to 12 bu.	25 + yrs.	3
3 to 4 yrs. 5 to 6 yrs.	5 to 6 yrs. 8 to 10 yrs.	1 bu. 3 to 4 bu.	12 to 15 yrs. 25 + yrs.	4, 5, 6
3 to 4 yrs.	5 to 6 yrs.	3 to 5 bu.	15 to 17 yrs.	7
4 to 5 yrs.	6 to 8 yrs.	2 to 3 bu.	15 to 17 yrs.	8, 9
3 to 4 yrs.	5 to 6 yrs.	50 to 60 lb.	15 to 17 yrs.	10
5 to 6 yrs.	8 to 10 yrs.	60 to 80 lb.	20 yrs.	11, 12, 13
3 to 4 yrs.	10 yrs.	1 bu.	20 yrs. +	14, 15
5 to 7 yrs.	10 to 12 yrs.	25 to 50 lb.	40 + yrs.	16, 17
5 to 7 yrs. 10 yrs.	8 to 10 yrs. 14 to 16 yrs.	10 bu.	30 + yrs.	18
4 to 5 yrs. 4 to 5 yrs.	10 yrs. 10 yrs.	200 to 250 lb. 50 to 100 lb.	15 to 20 yrs. 15 to 20 yrs.	19, 20, 21

Notes

Apple

1. Trees on Malling 7 (A), Malling 26 and Malling 9 rootstocks should be staked or trellised to provide extra support.

2. While apple trees on all rootstocks benefit from irrigation, it is essential for trees on Malling 9 and Malling 26 rootstocks.

3. For best production, most apple varieties need to be cross-pollinated by a second variety having viable pollen and that blooms at the same time. Mutsu, Jonagold and Winesap have sterile pollen necessitating the planting of third variety. Pollinator trees should be planted within 50 feet of the variety to be pollinated.

Pear

4. All European and Asian pears need to be cross-pollinated by a second variety that blooms at the same time. European pear varieties generally will not pollinate or be pollinated by Asian pears, as bloom times often do not coincide.
5. Fireblight can be a devastating disease to many apple and pear varieties. Select those having resistance to this disease. Since fireblight may also reach serious levels in several apple varieties, planting pear trees and apple trees near each other should be avoided if possible.
6. Fruit of European pear varieties develop their best quality when harvested prior to becoming fully ripe, stored in the refrigerator for two to three weeks and then allowed to ripen fully at room temperature. Fruit from Asian pears should be allowed to tree ripen on the tree.

Peach, Nectarine

7. Virtually all varieties have self-fertile blooms. Therefore, cross-pollination is not necessary.

Plums

8. Most, but not all, plum varieties need to be cross-pollinated.
9. A prune is a plum with a high sugar content that allows drying whole without fermentation at the pit.

Tart Cherries

10. Cross-pollination is not necessary for tart cherries.

Sweet Cherries

11. Most sweet cherry varieties need to be cross-pollinated by a second variety that has the same color fruit.
12. Tart cherries will not cross-pollinate sweet cherries as bloom times do not correspond.
13. Sweet cherry production is not highly successful in Tennessee. Trees are susceptible to cold injury and canker diseases.

Quince

14. Quince is very susceptible to fireblight.
15. Quince is often used as a dwarfing rootstock for pears. Incompatibility between quince and pear may occur in grafting, necessitating the use of an interstem.

Pawpaw

16. Called the “poor man’s banana,” pawpaw grows best in shade—especially when the plant is young.
17. Adapted to soils with a pH from 5.0 to 7.0.

Mulberry

18. Mulberry is either wind-pollinated or fruits without having to be pollinated.

Persimmon

(American)

19. American persimmon needs to be cross-pollinated from a second variety of American persimmon. Persimmon trees are usually either male or female, but some trees have both male and female flowers.

(Oriental)

20. Oriental persimmons do not need to be cross-pollinated.
21. Trunks, if unprotected, are quite susceptible to winter damage.

Factsheets in the “Fruits and Nuts” series:

SP307A	Fertilizing and Liming Fruit Trees
SP307B	Planting Fruit Trees
SP307C	Chinese Chestnut in Tennessee
SP307D	Fruit Tree Management Timetable
SP307E	Thinning Tree Fruit
SP307F	Training and Pruning Grapevines (4-Cane Kniffin System)
SP307G	Protecting Fruit Trees from Winter Injur
SP307H	Home Tree Fruit Plan
SP307I	Figs in the Home Planting
SP307J	Landscaping With Fruit and Nut Crops
SP307K	Pruning Neglected Fruit Trees
SP307L	Selecting Quality Apples
SP307M	Selecting Quality Peaches
SP307N	Selecting Quality Grapes
SP307O	Apple Cider Production

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