

BULLETIN
OF THE
The Agricultural and Mechanical College
of Texas

(In co-operation with the United States Department of Agriculture.)

NOVEMBER, 1916

EXTENSION SERVICE

No. B-30

HOME ORCHARDS IN
TEXAS



Address
CLARENCE OUSLEY,
Director and State Agent, College Station, Texas.

THE HISTORY OF THE

... of the ...
... of the ...
... of the ...

... of the ...
... of the ...
... of the ...

... of the ...
... of the ...
... of the ...

... of the ...
... of the ...
... of the ...

... of the ...
... of the ...
... of the ...

... of the ...
... of the ...
... of the ...

... of the ...
... of the ...
... of the ...

... of the ...
... of the ...
... of the ...

... of the ...
... of the ...
... of the ...

The Home Orchard in Texas

By W. B. Lanham, Horticulturist and Chief, Division of Plant Industry,
Extension Service, A. and M. College of Texas.

The home orchard deserves a place of more importance in the plan of crop diversification in Texas than it has been accorded heretofore. If properly planned and cared for the home orchard will become a large contributor to the health, wealth and happiness of the entire farm family and will, also, become an important factor in the economic progress of the state.

To emphasize the importance of an effort to encourage the growing of fruit on the farm, reference is here made to the report of the last census of the United States, taken in 1910, showing the number of farms in Texas on which fruit was raised in 1909:

AMOUNT OF FRUIT ON TEXAS FARMS.

CROP	Farms Reporting Fruit	Number of Farms in State	Per Cent of Farm Reporting
Strawberries	1,423	417,770	.3
Blackberries and Dewberries	5,459	417,770	1.3
Apples	36,055	417,770	8.0
Peaches	108,959	417,770	25.0
Pears	40,397	417,770	8.0
Plums and Prunes	46,013	417,770	11.0
Pecans	10,519	417,770	2.0
Figs	11,380	417,770	2.5

There are many sections of the state that are well adapted to strawberries and yet only 1423, or .3 per cent of the farms are growing any of these berries. Blackberries and dewberries do well over a large portion of the state and yet only 5,459 or 1.3 per cent of the farms reported these crops. Peaches are grown apparently over a larger portion of the state than any other fruit, as 25 per cent of the farms reported peaches. We have no way of telling, from the data submitted, whether the same farms that grew peaches also grew other fruit or not, but we may reasonably assume that many of them did, and as 75 per cent of the farms had no peaches it seems reasonable to say that at least 60 per cent of the farms in Texas have no fruit on them whatever.

The production of fruit in the state has decreased in recent years. All the fruit grown in 1909 was 58.8 per cent less than was reported by the census ten years before, while during the same period the population increased 27.8 per cent and the number of farms 18.6 per cent.

Something is radically wrong when the production of fruit drops more than one-half in ten years and during that time the population increases more than one-fourth. I am not prepared to say what the trouble is, unless it be that the planting of orchards has been confined to a few sections in which it has been overdone, and throughout the state little

attention has been given to orchards after planting and still less to markets and preparing fruit for shipment.

The time has passed, if, indeed, there was ever such a time, when satisfactory crops of fruit can be obtained from trees which receive no attention after planting. They must be cultivated as other crops are, and in addition must be pruned and sprayed to control insect enemies and fungus diseases.

Some may say that fruit growing in Texas is unprofitable, otherwise those who planted orchards would have continued in the fruit business. For answer let us quote from the 1915 yearbook of the United States Department of Agriculture the prices received for apples and peaches in each of the following states for the years 1910-15 inclusive:

AVERAGE PRICE OF FRUIT FOR 1910-15 INCLUSIVE.

STATE	APPLES	PEACHES
Missouri	\$.71 per bu.	\$.93 per bu.
Arkansas .....	.98 per bu.	.88 per bu.
Washington .....	.84 per bu.	.93 per bu.
Oregon .....	.90 per bu.	1.23 per bu.
California .....	.92 per bu.	.88 per bu.
Georgia	1.01 per bu.	1.12 per bu.
Texas	1.23 per bu.	1.16 per bu.
U. S. ....	.78 per bu.	1.12 per bu.

Texas received a better price for apples than any of the famous apple states and much better than the average for the United States. She received a better price for her peaches than any of these states except Oregon. So what is wrong? Are we making so much money out of cotton that we cannot afford to raise fruit?

A number of counties in the state report only a few fruit trees and there are eight counties that do not report a single fruit tree or berry bush. Perhaps it is because they will not grow in these particular counties, but I think rather that fruit growing has not been developed as a part of the general farm scheme in places where fruit will grow well. I visited a portion of the western part of the state last fall and traveled for miles and would only occasionally see a fruit tree. Yet the trees that had received good care were growing and producing well and showed a profit to the owner. This record does not necessarily mean that fruit trees can be grown only in a limited area, but rather that they have not been seriously tried.

Perhaps there are parts of the state that will not grow fruit successfully. If such is the case I venture to say they will grow little else successfully. I have yet to see the place that will grow good general farm crops that will not produce some kind of fruits or berries,—perhaps not of the highest quality, but certainly much better than commercially canned stuff, and far superior to no fruit at all. It is not that fruit will not grow on the general farm, but that it has not been given a chance.

The home orchard has not yet been given consideration by the general farmer, as is true of many other home conveniences and utilities.

The cotton farmers are in the same position in that regard, as the wheat farmers were a few years ago in the Northwestern States. I have traveled for miles and miles through the wheat farms of the Paluse districts of Oregon and Washington when they grew nothing but wheat, oats and barley. They did not try to raise any fruit or vegetables and everything was bought canned. They thought they could not raise fruit in that section, but as the fertility of the land became depleted and wheat was not so profitable, they had to turn their attention to other crops and found that where they could get sufficient moisture fruit would do well.

Over a large portion of Texas it is simply a question of planting the trees and giving them reasonable care. Many have the idea that fruit will not succeed on the black lands. I wish every black land farmer could see an orchard owned by Mr. H. E. White, of Lancaster, Dallas County. He had a bearing home orchard on the black land there that had received the same care that the average orchard of Texas receives—that is, a little cultivation and practically no pruning or spraying. During an Orchard Clean-up Campaign in 1915 I pruned one peach tree in Mr. White's orchard. While he did not actively protest at the way in which I pruned it, yet I could see that it did not meet with his approval. I visited his orchard in the spring of 1916 and this tree had some fruit as fine as I have seen in any part of the state, while on the unpruned trees the peaches were about the size of plums.

In the spring of 1916 Mr. White planted a home orchard under directions and instructions furnished by the Extension Service of the A. and M. College. We suggested the varieties and assisted him in laying off his land, planting the trees, pruning them, etc. He lost only two trees out of the entire lot and these never started growth at all. The other trees made as good growth as one could wish to find anywhere.

The value of fruits as food has been underestimated. Figures taken from Farmers' Bulletin No. 293, showing the amount of heat or energy units that can be purchased for ten cents in various kinds of fruits, as compared with porterhouse steak, are given below:

Fruit
FOOD VALUE OF MEAT AND FOOD COMPARED

Porterhouse Steak	444	Calories
Apples	1467	Calories
Grapes	837	Calories
Peaches	349	Calories
Blackberries	386	Calories
Figs (Dried)	988	Calories

This shows that we are getting good value for our money when we buy fruit as food, but its greatest value is not in the amount of energy, but in the tonic and stimulating effect that it possesses.

Of course we may say that we can grow cotton and buy the fruit cheaper than we can raise it. This may be true in a few cases, although I very seriously doubt it; but even if it were true, the trouble is we don't buy it. It is not only difficult for the farmer to get to town and buy fresh fruits, even if he could find them on the market, but he does not like to

pay out his good money for things that deep down in his heart, he feels he ought to be growing himself, and the chances are that he and his family simply do without fruit.

Often the farmer who has not perviously grown fruit thinks that an orchard will seriously interfere with his other farm work. This need not be the case, as the trees are planted in the fall or early spring when there is little else being done on the farm. The pruning is practically all done in the winter or early spring before general farm operations commence. The small amount of spraying that a home orchard would require need not interfere with the general farm work. If the average farmer will cut out one fishing trip he can easily attend to his spraying. The cultivation can be done at the same time and with the same tools as are used for the general farm crops. On the average farm most of the fruit is grown simply for home consumption. The harvesting will not interfere with ordinary farm operations, as it will be performed by the wife or children.

Where one is close to a good market, the home orchard may assume more importance and be planned to receive a more prominent place in the farm operations, as the surplus fruit will find a ready sale, if properly handled, and farming will be found more profitable. I could cite numerous cases of profit that have been derived from well cared for orchards in this state, but will confine myself to a very few. One that I have in mind is Mr. Chas. D. Cuthbertson, near Comanche, Texas. He has a farm six miles from Comanche and has given it reasonably good care, both in cultivation and in harvesting and marketing his products. Some of his returns last year were as follows:

3 acres of Plums	\$ 158.22
Half acre of Grapes	428.00
Half Acre of Berries	290.44
10 Acres of Peaches	377.50
20 Acres of Apples	3500.00

These are gross figures, but practically all the work was done by Mr. Cuthbertson and his family. He sprayed his orchard, however, at a cost for material of \$150.00, and a number of the neighbors who did not spray bought fruit from him.

Mr. J. H. Bradford, of Emory, Texas, after using all his family required, sold \$25.70 worth of strawberries from a plat of ground 33x72 feet. This was at the rate of \$460.50 per acre. This fruit also was not shipped, but was sold to his farm neighbors, who say "there is no money in fruit growing."

VARIETIES OF FRUIT RECOMMENDED FOR HOME ORCHARD.

The map shown on pages 8 and 9, divides the state into fruit districts. This was prepared by G. H. Blackmon, formerly assistant professor of Horticulture at A. and M. College of Texas. With a few changes, the list of varieties are as recommended by Professor Blackmon. Following is a list of varieties of fruit recommended for the several districts:

DISTRICT 1—(a)

PEACHES—Greensboro, M. Ross, Elberta, Minnie Stanford, Indian Cling, Henrietta.

FIGS—Magnolia, Celestial.

PEARS—Keiffer.

APPLES—San Jacinto.

PLUMS—Six Weeks, Wickson, Wild Goose, America.

PECANS—Stuart, Delmas.

GRAPES—Herbemont, Brighton.

SMALL FRUITS—Dallas Black Berry, Austin Dewberry, Klondike and Lady Thompson Strawberry.

DISTRICT 1—(b)

PEACHES—Greensboro, Carmen, Pallas, Minnie Stanford, Ea. Crawford, White English.

FIGS—Magnolia, Celestial, Brown Turkey.

PLUMS—Burbank, Golden Beauty, Six Weeks.

PECANS—Stuart.

GRAPES—Black Spanish, Moore's Early, Tokay, Thompson Seedless.

SMALL FRUITS—Dallas Blackberry, Austin Dewberry, Klondike and Lady Thompson Strawberry.

CITRUS FRUITS—Satsuma Orange, and a good variety of Kumquat.

DISTRICT 2—(a)

This division takes in the principal fruit section of Texas. Most all of the deciduous fruits will succeed in this district. Varieties to be recommended by the writer are as follows:

PEACH—Mayflower, Alexander, Arp Beauty, Ea. Wheeler, M. Ross, Ea. Crawford, Yellow Swan, Slappy, Minnie Stanford, Elberta, Augbert, Indian Cling, White English, Henrietta.

FIGS—Brown Turkey, Celestial.

APPLES—Texas Red, Yellow Transparent.

PLUMS—Six Weeks, Wild Goose, Burbank, Abundance.

PECANS—Delmas, Schley.

GRAPES—Brighton, Concord, Niagra.

SMALL FRUITS—Dallas Blackberry, Austin Dewberry, Lady Thompson Strawberry.

PEARS—Keiffer and Garber.

DISTRICT 2—(b)

This sub-division takes in most of the black belt of Texas, and for that reason it is a very important farming section. A large variety of fruits will succeed to a very marked degree in this section as in other sections better known as fruit producers. Varieties recommended are as follows:

PEACHES—Greensboro, Arp Beauty, M. Ross, Minnie Stanford, Elberta, Chinese Cling, Family Favorite, Salway, Henrietta.

FIGS—Celestial, Brown Turkey.

APPLES—Red June or Texas Red.

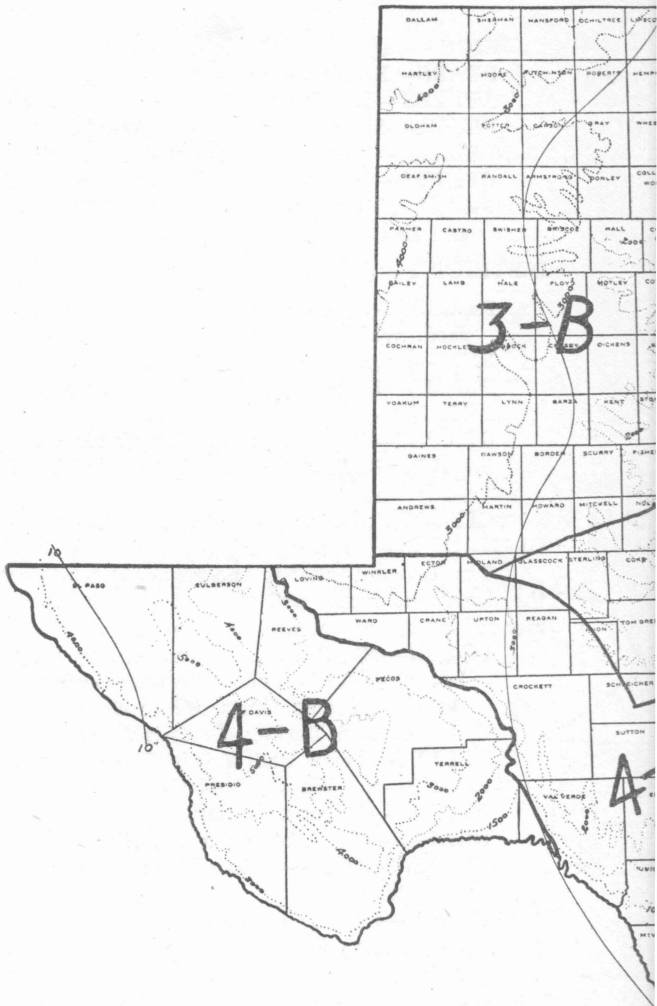
PEARS—Keiffer and Garber.

PLUMS—Six Weeks, Abundance, Burbank, Wild Goose.

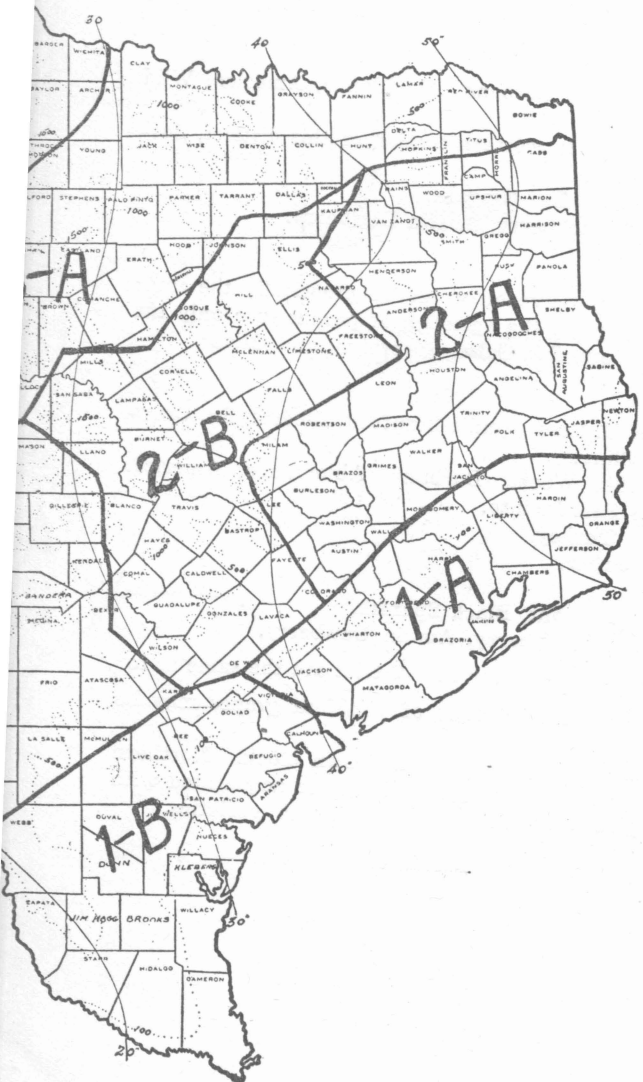
PECANS—Stuart, Delmas. In the western part, Sovereign and Halbert or Oliver.

GRAPES—Moore's Ea. Brighton, Herbemont or Black Spanish.

SMALL FRUITS—Dallas Blackberry and Austin Dewberry.



MAP SHOWING FRUIT



CTS OF TEXAS.

DISTRICT 3—(a)

In this district we find more apples grown than in the others. However, for a home orchard the recommendations will be largely the same as district No. 2.

PEACHES—Greensboro, M. Ross, Ea. Crawford, Chinese Cling, Elberta, Minnie Stanford, Indian Cling, Salway, Henrietta or Heath Cling.

APPLES—Kinnard, Red June, Schockley, Winesap, Yellow Transparent, Jonathan, San Jacinto.

PEARS—Keiffer and Garber.

PLUMS—Six Weeks, Wickson, Burbank, Abundance, America, Wild Goose, Shiro.

PECANS—Stuart, Delmas. In western section of this district, Sovereign, Halber, and Oliver.

GRAPES—Brighton, Moore's Ea. Niagara.

SMALL FRUITS—Dallas Blackberry, Austin Dewberry.

DISTRICT 3—(b)

My recommendations for this division would be practically the same as for (a) of this district, except in the varieties of pecans, use only the western varieties such as Halbert, San Saba, Sovereign, and Oliver.

DISTRICT 4—(a)

PEACHES—Mayflower, M. Ross, Minnie Stanford, Elberta, Ea. Crawford, Salway, Heath Cling.

PLUMS—Wild Goose, Six Weeks, Burbank, Abundance, America.

APPLES—Red June or San Jacinto.

FIGS—Celestial, Brown Turkey.

PEARS—Keiffer and Garber.

PECANS—Halbert.

GRAPES—Brighton, Herbemont, Black Spanish.

SMALL FRUITS—Dallas Blackberry, Austin Dewberry.

DISTRICT 4—(b)—Recommendations for this district are the same as for (a) except one or two of the best varieties of Vinefera grapes may be added.

As a general rule it is better to buy home-grown stock. Northern stock may grow well, but the home nurseryman is better acquainted with local conditions and can give valuable suggestions as to varieties.

PLANTING.

The holes should be dug about two feet deep and about three feet in diameter and should be partially filled with rich top soil before the tree is planted. If the sub-soil is very tough, it is well to dig the hole perhaps three feet deep and four feet in diameter and fill it almost full of rich



Digging Hole in such a way that locating stake will be in center of hole.



"Sighting in" tree by rows of stakes.



Working soil well around roots and under crown of tree.



Packing soil tightly around roots by tramping.



Leave top soil loose so that it will not crust and dry out.



Heading the tree knee high.

top soil. In planting, the best results are obtained where two men work together, both digging the hole and then one throwing in the dirt while the other packs it firmly around the roots of the tree. After the hole is filled to within a few inches of the top, both finish filling.

The roots should be pruned back to about eight to twelve inches in length, cutting off any broken or diseased ones back to sound wood and if any are found infected with crown gall, the tree should be rejected and burned. After planting the tree should be headed 18 or 20 inches high. Care must be taken to pack the soil firmly around the roots and if there is a heavy root system, it will probably be necessary to do this with the fingers. (Figure No. 3). Use only top soil in filling, as this is much more fertile than sub-soil taken out of the bottom of the hole. After the dirt has been worked firmly under the crown with the finger, the roots may be covered with soil and packed down tightly with the feet, one man throwing in the dirt, while the other tramps it down, at the same time holding the tree to keep it in alignment. (Figure No. 4). When planted the tree should stand from one to two inches deeper than it stood in the nursery row, and the top of the soil should be left loose so that it will not pack and dry out.

HORTICULTURAL LITERATURE.

While some information on varieties and methods of planting have been given above, this bulletin is intended to arouse an interest in the home orchard and is not designed as a scientific treatise on the care and management of orchards. Having resolved to plant a new orchard or give better care to an old one, the farmer is invited to write for any of

the following bulletins and circulars which will supply him with valuable information on the subjects indicated:

B-29 Peach Production in Texas.

B-22 Harvesting and Packing Peaches.

107 Spraying Apples and Pears.

108 Summer Spraying of Stone Fruits—Peaches and Plums.

110 Cultivating the Growing Orchard.

111 Cultivating the Young Orchard.

121 Thinning Fruit on Peach and Apple Trees.

B-21 Top-Working Pecan Trees.

157 Planting and Transplanting Pecans in Texas.

Copies of these publications may be obtained by writing to Clarence Ousley, Director of Extension, College Station, Texas.