ALABAMA COOPERATIVE Extension SYSTEM

ANR-53-J

ALABAMA A&M AND AUBURN UNIVERSITIES

Fruit Culture in Alabama

Nursery Stock and Planting Techniques

Because fruit plantings are a long-term investment, careful selection and proper care of nursery stock is very important. For the same reason, proper planting techniques are crucial for home and commercial fruit producers.

Selection of Nursery Stock

To obtain good-quality nursery stock of the varieties you want to plant, locate reliable nurseries that supply top-quality plants. Your county Extension agent can provide information on reliable sources.

Place an order during the late spring, some 6 months to a year or more ahead of planting time. Desired varieties and strains of some fruit types (especially patented varieties) may be in short supply at planting time. The recommended sizes and ages for planting stock are presented in Table 1.

Care of Nursery Stock

Examine nursery stock as soon as you receive it. Check for correct varieties, rootstock, size, number of plants, dryness, mechanical injury, insect and disease injury, and cold injury. To check for cambial cold injury, take a sharp knife and cut through the bark to the cambium area of the trunk just above and below the bud union. If the cambium is brown or off-color, cold injury has occurred.

If you purchase container-grown stock, be sure to keep the roots damp and to protect plants from severe winter temperatures that might freeze the roots. An increasing number of fruit plants, such as blueberry, grape, and blackberry, and some tree fruits, are available in containers. You may find that a containerized plant is easier to handle and maintain than a bare-root plant.

Table 1. Recommended Sizes and Ages for Planting Stock

Fruit Type	Size	Age (in years)*
Tree Fruit		
Apple	4 to 6 feet	1-year-old plants
Pear, Asian pear	4 to 6 feet	1-year-old plants
Peach, nectarine	2½ to 4 feet	June buds or 1-year-old plants
Plum	2½ to 4 feet	June buds or 1-year-old plants
Cherry	4 to 5 feet	1-year-old plants
Persimmon	3 to 5 feet	1- to 2-year-old plants
Pomegranate	3 to 5 feet	1- to 2-year-old plants
Fig	2 to 4 feet	1-year-old plants
Small Fruit		
Bunch grape		2-year-old plants (1-year-old plants can be used)
Muscadine grape		2-year-old plants (1-year-old plants can be used)
Blackberry, erect		1-year-old rooted cuttings or root pieces 6 inches long and ⅜ to ⅝ inch in diameter
Blackberry, trailing		1-year-old rooted cuttings or tip layers
Raspberry		1-year-old rooted cuttings or tip layers
Blueberry		1- to 2-year-old plants (from rooted cuttings)
Strawberry		1-year-old, virus-free plants
Subtropical and Exotic Fruit		
Satsuma	2 to 4 feet	1- to 2-year old plants
Kumquat	1½ to 4 feet	1- to 2-year-old plants
Kiwifruit	3 to 5 feet	1- to 2-year-old plants
Feijoa	3 to 4 feet	1- to 2-year-old plants

*For grafted or budded plants, age refers to the fruit-bearing scion portion.

If you purchase bare-root plants, check to see if they are sufficiently moist. If they will not be planted the day they arrive, you can keep bare-root plants for several days in refrigerated storage if it is available. Maintain humidity at 90 percent or higher, but do not leave excess moisture on plants. Do not store fruit plants in refrigerated areas that also contain fruit or vegetables (such as apples) that give off ethylene gas. Ethylene gas will severely injure or damage plants.

If refrigerated storage is not available, heel-in bare-root tree fruits or small fruit plants such as grapes, blackberries, and blueberries as follows:

- Remove wrapping material.
- Dig a beveled trench in an east-west direction. Make sure the sides are angled, not straight down.
- Place trees in the trench, and cover all tissue with soil except for the upper 12 to 18 inches of the top. The roots should be covered with at least 8 to 12 inches of soil to protect them from freezing.
- Do not use soil that is infested with nematodes or disease. Use soil in a virgin area or, if possible, soil that has been fumigated.

How to Plant

Experienced workers can do quite well at placing a fruit plant in the appropriate location and planting it at the proper depth. However, when less experienced workers are involved, the use of a planting board to gauge proper planting depth is advisable, at least until the workers become experienced.

Since digging a hole for the tree means removing the stake used for layout, you may want to make a planting board for a guide (Figure 1). Make a planting board from a 6-inch-wide board about 4½ to 5 feet long. Use a board that is longer than the distance across the hole. Cut a shallow, V-shaped notch into each end of the board; in one edge, cut a U-shaped notch equally distant from the ends. This U-shaped notch should be a little deeper than half the board's width.

Before removing the stakes, place the board with the center U-shaped notch around the stake; then drive two small stakes through the end V-shaped notches. Remove the board, and dig the hole. Then replace the board and set the tree in the notch previously occupied by the marker stake. Using this method ensures that the trees are aligned and planted at the correct depth. To ensure accuracy, sight the trees as you progress down the row.

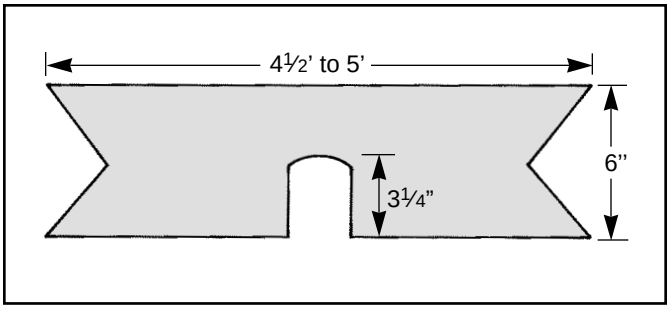

Figure 1. Planting board used to place trunk of tree in exact location of stake and at proper depth when planting

Dig holes large enough to accommodate the root system of the plant being set. Digging excessively large holes is not necessary where the site was subsoiled. Subsoiling is frequently done in large plantings. However, in home plantings, you may want to dig the hole one and one-half to two times the diameter of the root ball. Do not dig the hole too deep, however. The hole should be just deep enough to accommodate the root system without being too deep.

The depth of planting depends on the plant type and rootstock being used. Plant most plants, such as peaches and plums, at the same depth they were growing in the nursery. Plant apple scion varieties on dwarf and semidwarf rootstocks slightly deeper, but leave at least 2 inches of rootstock aboveground (Figure 2). Fill the hole with topsoil, leaving a slight depression around the plant. When you use full dwarfing rootstock, stake or trellis the plants. Avoid planting strawberries too deep or too shallow (Figure 3).

Water each plant thoroughly at planting time to settle the soil around the roots and remove air pockets. If the soil is already wet, you may not need to water at this time. Water plants once or twice a week as needed for 3 to 4 weeks or until winter rains are providing good soil moisture.

Mulch home orchards where frequent watering is not possible. Mulching is not essential or necessary for commercial production.

At the time of planting, prune the plants to compensate for root loss, to stimulate vigorous shoot growth in the spring, and to provide for ease in training. A general rule to follow is to remove the top one-third of the plant when you transplant it. Less top pruning may prove satisfactory for containerized plants, but pruning is still recommended, especially where plants are somewhat root-bound or where desirable type branching is needed.

Some plants require special site preparation before planting and rather specific irrigation requirements for a short period thereafter. For example, before setting blueberry plants, thoroughly incorporate ⅛ to ¼ bushel of peat moss into each planting hole.

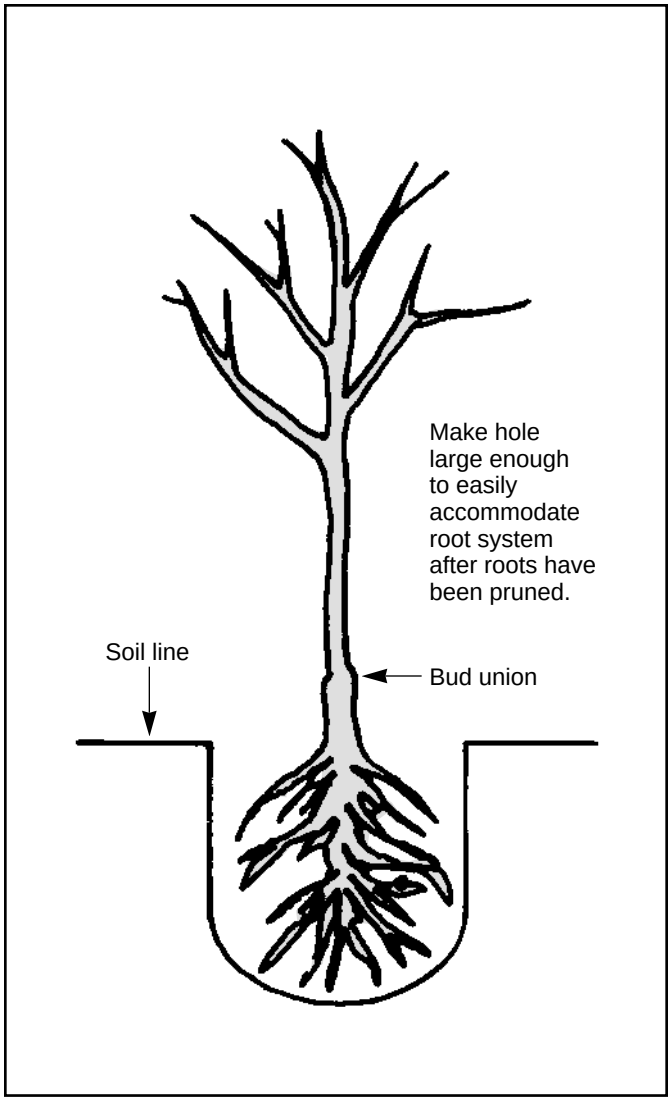

Figure 2. How to plant bare-root fruit trees

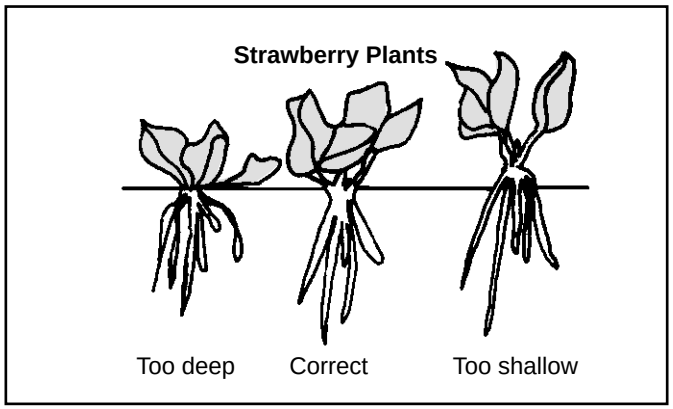

Figure 3. How to plant strawberries

When establishing bare-root strawberry plants using the plasticulture system, use special irrigation daily to several times weekly for the first 2 to 3 weeks following planting in the late summer or early fall.

When to Plant

All of the fruit plants described in this publication, except for blackberries and strawberries, usually do best when planted in late fall to early winter. December is usually the best single month for planting, although November is quite good if cooler winter temperatures are well under way. Planting may continue throughout January and February, but the earlier most plants are established, the more they will grow the subsequent year.

When blackberries are established using root cuttings, wait until March to avoid freeze damage to emerging young shoots. Plantings can be made from early to late March from the southern to northern areas of the state, respectively. When plants are used, blackberries can be planted like tree fruits—in fall to early winter.

Matted-row strawberries should be planted during February and March for best results. However, if plants are stored in proper refrigeration and irrigation is available, plantings can be satisfactorily established from April through June.

When strawberries are grown on plastic, they should be planted from September through early November. Plantings should be made during the earlier part of this period in northern counties. If plug plants are used, they can be planted about 2 weeks later than bare-root plants in the same area and give maximum fruiting the following spring. Plants that have been stored for several months should be planted in August or September.

November and December are usually ideal for planting blueberries from containers or bare root. Containerized blueberry plants can be planted almost any month of the year if they will be well cared for. However, even when planted from containers, all fruit plants usually live and grow better when established during the late fall to winter period.

After Planting the Tree Fruit Orchard

The orchard floor, except for herbicide strips along tree rows, should be maintained in grass for ease of traffic movement and to reduce erosion. Periodically mowing the orchard floor between rows will reduce grass competition, insect activity, and weed and disease problems. Chemicals are available to suppress but not kill grass in the orchard floor to reduce need and cost of mowing.

Some preemergence and postemergence herbicides are available to home gardeners. These can be used to control weeds, but special care must be exercised to avoid causing toxicity problems in young plants. See Extension publication ANR-53-M, “Fertilization and Weed Control.”

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For more information, call your county Extension office. Look in your telephone directory under your county's name to find the number.

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