

PLANTING YOUNG TREES

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Peach trees should be planted while fully dormant during the period from early December to mid-March. Because root growth may occur during the relatively mild winters experienced in parts of the Southeast, planting in December may be advisable, provided soil conditions are suitable. However, when trees arrive from the nursery and soil conditions are not ideal for planting, trees should be stored or “heeled in” as described in the [Selecting and Handling Young Trees](#) chapter. When soil conditions become favorable, plant trees as early as possible so the roots will establish before spring growth begins.

The planting site should be prepared as outlined in the [Site Selection and Preparation](#) chapter. Planting a tree is a relatively simple task if a few simple guidelines are followed: (1) prune off damaged roots before planting; (2) place roots in their natural position as nearly as possible; (3) plant the tree at the same depth it grew in the nursery; and (4) never mix nitrogen fertilizer in the planting hole or put it on the loose soil immediately after planting. Fertilization should be carried out as described in the [Nutrition](#) chapter. Three methods are commonly used to plant trees: (1) mechanical tree planter; (2) auger; and (3) furrow. The advantages and disadvantages of each method will be discussed; however, all possibly lead to excessively deep planting. Research shows that the tree’s root system must be set no more than two inches deeper than nursery depth if maximum growth and livability are to be obtained.

Correct depth of planting is important in all soil types but critical in heavier soils. Table 1 gives the results of a planting study that shows the results of shallow planting on tree growth.

Depth to Crown Roots (in)	Year 1: Mean Leaf Area (in ²) in May	Year 2: Trunk Cross Sectional Area Increase (in ²)	% Suffering from Drying Air Pockets Around Roots
2	6.2 a	1.4 a	14 a
4	4.4 b	0.7 c	43 ab
6	4.4 b	0.9 bc	100 c

Adapted from Lyons, C. G. Jr., K. S. Yoder and R. E. Byers. 1982. Growth of mechanically planted nectarines at various depths. Hortscience. 117: 968-969. Means followed by the same letter within a column are not significantly different in Duncan’s new multiple range analysis (P < 0.05).

The mechanical tree planter offers growers a method to plant large numbers of trees in a short period of time. Experiences in Georgia and South Carolina show that a three-person planting crew can plant an average of 400 to 600 trees per hour under ideal planting conditions. Growers that have used this method of planting feel the transplanter can pay for itself in labor savings if 10,000 or more trees are planted. Tree livability has also been excellent using the mechanical tree planter. Because large numbers of trees can be planted in such a short period of time, growers can plant during brief periods of good winter planting conditions rather than waiting for the drier conditions of spring.

Thorough subsoiling of the orchard site prior to planting the trees is essential to prevent “transplanter syndrome.” Transplanter syndrome is best described as a concentration of tree roots in the transplanter furrow that ultimately results in the leaning of trees at right angles to the furrow. If cross-checking with a subsoiler is done to mark where the trees should be planted, the trees should be planted exactly where the transplanter and cross-check intersect. Because

the mechanical tree planter is a rapid method of planting trees, some hand follow-up may be necessary to straighten leaning trees or to adjust the depth of planting.

Use of a tractor-mounted 18- to 24-inch auger also provides a very reliable system for digging tree holes prior to planting. One of the more common errors in the use of an auger is to drill the holes too deep. Although this practice does make the subsoil looser, the young trees often sink to an unacceptable depth due to soil settling. Holes should be dug only deep enough to accommodate the tree.

Do not use an auger or tree planter on extremely wet clay soils because the auger action tends to seal this area, restricting movement of roots into adjacent soil. This sealing action (glazing) also results in poor internal drainage of soil water. Glazing can be reduced by welding a two-inch long piece of metal to the edge of the auger. This metal protrusion greatly reduces glazing and aids young tree growth.

The furrow method of planting peach trees is of particular value on lighter soils with small trees (18 to 24 inches), but can be used for larger trees. If furrows are cut deeply enough (12 inches) while laying off the rows, little additional digging will be required when planting the trees. Cross-checking with a single shank subsoiler when using the furrow method can be a good way to mark where the trees will go. When trees are to be planted at the intersection of furrows and the subsoil check, the orchard site should be laid off just prior to planting to avoid excessive drying of the soil and to allow for maximum ease of planting in freshly tilled soil.

When planting trees by hand, care should be taken to work the soil around the roots to eliminate air pockets. Good root/soil contact will encourage better tree survival and growth. If soils are dry at planting, watering the trees will further help to get good root/soil contact.

Regardless of the planting method used, trees should not be planted in overly wet soils. Dry soils should also be avoided unless trees will be watered immediately after planting; however, post-plant watering is not always feasible.

Each tree planting method has its own strengths and weaknesses, but, when properly used, each will give satisfactory results. Table 2 shows that the tree planter, properly used, gives slightly better plant performance both in growth and anchorage over conventional augers, but no growth improvement over a modified auger. Unless a grower has a large number of trees, a planter may not be a justifiable expense. Therefore, the trench method or the modified auger may be the preferred method.

Table 2. Growth and anchorage of 1-year-old Rome apple trees as influenced by planting method in West Virginia.		
Tree Planting Method	Total Shoot Growth (in)	Uproot Force (lb)
Tree Planter	170 a	337 a
Conventional 24" Auger	142 b	288 b
Modified 24" Auger	174 a	266 b

Means followed by the same letter within a column are not significantly different in Duncan's new multiple range analysis ($P < 0.05$).