Planting container-grown loblolly pines first came into commercial use in the 1970's, but is currently attracting increased interest among southern landowners and foresters as a means of extending the planting season and surviving drought. As many as 20 million containerized seedlings are now planted each year. In addition, longleaf pine lends itself especially well to containerized planting.

Using containerized seedlings has several advantages over using bare root seedlings. A crop of containerized seedlings can be produced at any time of the year. Producing containerized seedlings makes more efficient use of limited numbers of seeds, and seedling growth is increased. Using containerized seedlings extends the planting season, often improves growth on adverse sites, and survival is generally increased.

However, container seedlings also have several disadvantages. It takes more care to grow containerized seedlings than to grow bare root seedlings; the seedlings are often smaller than bare root seedlings; the containers are bulky; and per-seedling production costs are higher for containerized seedlings than for bareroot seedlings.

Containers can be divided into two general categories: containers planted with the seedlings and containers that are removed before outplanting. Paper pots, wood fiber containers, and biodegradable plastic containers are outplanted with the seedlings as a unit. Most containers are sturdy enough to withstand mechanical planting. Wood fiber containers planted with seedlings make direct contact with the soil, so root development is not restricted. Seedlings removed from their containers before outplanting are called “plugs.” After roots have developed sufficiently to bind the growing medium into a cohesive unit, the seedling and the growing medium are removed from the container as one unit and planted. When handled properly, newly outplanted plug seedlings have all their roots intact, so roots can begin growing into the surrounding soil immediately.

Although containerized seedlings are bulkier than bareroot seedlings, the uniform shape of the containers or plugs makes hand and machine planting relatively easy. Containerized seedlings can be hand-planted with conventional planting tools such as dibbles or mattocks. However, tools specifically designed for planting containerized stock can greatly speed planting, but the effectiveness varies with soil characteristics. These tools force open a space in the soil equal to the size of the container or plug. Most continuous or intermittent machine planters used to plant bareroot seedlings can be easily modified to plant containerized stock. Self-propelled machines capable of automatically planting various kinds of containers have also been developed.

Containerized seedlings can be planted 9-10 months of the year, particularly if summer rains are frequent. In the South, planting typically occurs from mid-September to mid-May. Planting should not be done during droughts or hard freezes. Most container seedlings survive and grow well in any season. However, field performance is affected by type of container and type of growing medium, degree of site preparation prior to outplanting, and site quality.

There is quite a cost difference between containerized seedlings and bareroot seedlings. Containerized seedlings cost between $150-$200 per 1000 trees whereas bare root seedlings cost between $39-$50 per 1000 trees. Labor costs to plant containerized seedlings are $3-10 higher per acre to plant than that of bareroot seedlings. However, using containerized seedlings add 4-5 months to the planting season as well as improving survival and growth.