SUMMER PLANTINGS OF SAND AND LONGLEAF PINES FAIL

LAWRENCE P. WILHITE and ROBERT P. SCHULTZ 1

Previous studies indicate that the planting season for slash pine in Florida can be nearly doubled by planting during the summer rainy season, as well as during the conventional winter planting season.[2] To determine if sand and longleaf pines could also be planted successfully during the summer, a total of 35,000 sand pine and 30,000 longleaf pine seedlings were outplanted in 1966 and 1967 in three counties of central Florida.[3]

In the summer of 1966, sand and longleaf seedlings from a November 1965 sowing were planted in Hernando County on the Withlacoochee State Forest. The planting site was a longleaf and scruboak ridge of Lakeland sand that had been clearcut and double chopped. In each 10-week period, 2,500 seedlings of each species were machine planted, beginning on June 23d. Weekly rainfall during this period averaged 2.7 inches and was never less than
11 inches. Nevertheless, some seedlings appeared to be dying a few days after planting. By winter, survival was less than 5 percent of all plantings. That same winter, the area was successfully replanted with sand and longleaf seedlings.

The following summer, part of this ridge plus a well-drained site of Arredondo sand on the Withlacoochee Forest in Citrus County were planted to longleaf seedlings. From a November 1966 sowing 2,500 seedlings were planted on each site on August 1, 1967. A heavy rain had fallen during the morning, and the seedlings were planted during a light rain in the afternoon. Again seedlings began dying within a few days, and by October survival was less than 5 percent on both sites.

In summer of 1967 sand pine was planted in Marion County.[4] The planting site was a scrub-oak ridge of Lakeland fine sand that had been double chopped. A part of this ridge previously had been successfully planted to sand pine during the winter. On July 13, 1,000 seedlings were hand planted in each of 10 weeks. Half of these seedlings were from an April 1966 sowing, and half were from a sowing in November 1966. The older stock averaged about 12 inches tall at the first lifting and about 20 inches at the last lifting. The younger stock averaged less than 6 inches tall throughout all liftings. The older stock had very large tops in comparison to the roots; the younger stock was better balanced. In late September, less than 2 weeks after the final planting date, survival of the various plantings ranged from 0 to 2 percent for the older stock and from 2 to 9 percent for the younger. These planting failures could not be attributed to lack of precipitation, for rainfall totaled 9.20 inches in July, 10.75 inches in August, and 2.62 inches in September.

On the basis of these results, sand and longleaf pines do not appear suitable for summer planting. Further summer planting trials with these two species do not seem justified unless some special treatment, such as transpiration inhibitor or root slurry, is to be tested.

1 Respectively, associate silviculturist and plant physiologist, Naval Stores and Timber Prod. Lab., Southeast. Forest Exp. Sta., Olustee, Fla.

2 Schultz, R. P., and Wilhite, L. P. Operational summer planting of slash pine. U.S.D.A. Forest Serv. Southeast. Forest Exp. Sta. Res. Note SE-80, 3 pp. 1967.

3 All seedlings were grown at the Florida Forest Service Nursery in Levy County, and all were planted the day after lifting.

4 The site was on Rock Hollow Farm, owned by Robert F. Crane. Paul Bielling, the Marion County Forester of the Florida Forest Service, was responsible for planting the seedlings and coordinating the work in this study.