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Deep-planting techniques to establish riparian vegetation in arid and semiarid regions

David R Dreesen and Gregory A Fenchel

A diverse riparian community established by natural regeneration along the Rio Grande near Socorro, New Mexico, comprising Rio Grande cottonwood, New Mexico olive, Emory's baccharis, and giant sacaton (Sporobolus wrightii Munro ex Scribn. [Poaceae]). Photo by G Fenchel

ABSTRACT

Invasion by exotic woody species and disruption of natural hydrologic conditions require the restoration of native riparian plant communities along rivers and streams in the Southwest. Successful establishment of phreatophytic riparian plant species has been accomplished using deep-planting techniques that involve the immediate exploitation of capillary fringe moisture by the existing root system of nursery stock or the adventitious root system of a cutting. These techniques, which require minimal or no post-planting irrigation in arid and semiarid regions, include the planting of dormant pole cuttings, dormant whip cuttings, tallpots with long root systems, as well as long-stem nursery stock whose root crowns are deeply buried.

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KEY WORDS

root crown, dormant pole cuttings, dormant whip cuttings, long-stem, capillary fringe, groundwater, phreatophyte, tallpot

NOMENCLATURE USDA NRCS (2008a)

15