

Maximum Growth Potential of Available Native Seed Sources for Roadside Plantings

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The Texas Department of Transportation (TxDOT) is required by the Clean Water act to reseed any area of soil disturbance larger than one acre. TxDOT is also subject to federal mandates that encourage the use native species whenever possible. In order to comply with these mandates it is critical that TxDOT uses native plant material that has long term survival, provides adequate soil coverage to prevent erosion, remains lower in stature to save mowing cost, and that does not create a safety or visibility hazard. From 2010-2014, we evaluated commercially available native and exotic seed sources for traits important for roadside use. Evaluations utilized transplanted plots at 6 sites representative of conditions in South, Central, and West Texas.

- Survival of transplanted species varied widely from site to site with the lowest being observed at Imperial, TX (West Texas) with only 12% of native species surviving longer than 1 year, and the highest survival in Kingsville, TX with 65% of species surviving.
- Despite good survival at 5 of 6 locations, there were just 10-20 native species out of the 60 tested that also met TxDOT height and canopy cover needs at each site.
- At each location only about 50% of the species that met vegetative performance needs produced seed that had higher than 50% viability, indicating poor adaptation of many sources, despite survival.
- Finding from this experiment were used to help draft new rural seeding specifications for TxDOT that will impact South, Central, and West Texas beginning in 2015.

Cooperative funding provided by the Texas Department of Transportation