

## DNA Fingerprinting to Assure Purity of Restoration Plants and Test for Crossing with Native Vegetation

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Many plants used in marsh restoration in Louisiana are vegetatively propagated selections to best fit the specific needs of the Gulf of Mexico coast. Over several years of maintaining stock in large production fields the parent material produces seed either by outcrossing or selfing. The seed potentially will contaminate the germplasm being maintained. Further problems arise when growers bid on projects for which they do not have sufficient plant material.

DNA fingerprinting allows a producer (such as an NRCS Plant Materials Center) to check its' own fields for contaminations. The producer then can develop strategies to minimize or eliminate sources of contamination and produce planting materials of highest purity levels in its fields. DNA fingerprinting also allows a contracting agency to check the purity of contractors' material if there is suspicion of fraudulent plants being supplied.

Equally exciting is the potential of DNA fingerprinting to test whether restoration germplasm is swamping native germplasm in any given local. A common problem with decreasing the gene pool of any species is the specter of a genetic monoculture. With DNA fingerprinting, we have the ability to determine the gene flow and dynamic interaction among the germplasm with native stands of the same species during restoration.

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