Survival of the Coastal Halophyte Sea Beach Amaranth (*Amaranthus pumilis* Raf.*)* in Loamy Soils.

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Abstract:

The purpose of this study was to determine if sea beach amaranth could be grown in soils other than native coastal sands and to observe and evaluate the need for innovative commercial nursery production techniques for sea beach amaranth. This study was conducted in order to provide inter-agency technical assistance to Natural Resources Conservation Service (NRCS) partners U.S. Fish and Wildlife Service and the U.S. Army Corp of Engineers. To date, very little information was available pertaining to whether or not the plant could be successfully grown in loamy soil typically found in commercial nursery operations in the mid-Atlantic region.

When the study was being planned, there was little information on nursery propagation protocols available. The NRCS Cape May PMC (PMC) staff attempted to build a beach like habitat located in the PMC research fields. A field was established by installing geo-synthetic woven weed barrier and covering it with 3" of light colored sand. It was speculated that the reflective properties of a light color sand located immediately under the plant branches and leaves could increase the chances of survival and optimize plant performance.

Results indicated that the plant can be grown in typical loamy soils and experienced 100% survival. Commercial seed production of seabeach amaranth on loamy soils can be cost effectively accomplished.

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