



TBEP Technical Report

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Thalassia testudinum Seedling & Nursery Quick Reference Guide

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Thalassia testudinum Seedling & Nursery

Quick Reference Guide

Introduction

This guide provides tips & tricks for finding & growing shore-cast seedlings of *Thalassia testudinum* (Turtlegrass) in a land-based nursery.



Seedling Collection

Ensure you have proper licenses and permits before collecting. Look for beaches, parks, and areas near seagrass meadows with high tidal exchange and minimal human disturbance.



Prioritize collecting green, healthy seedlings and fruits. In Florida, *T. testudinum* seedlings can be found from mid-July to mid-September. Once collected, store seedlings in seawater.

Nursery Set-Up

Seagrass nurseries control environmental conditions to provide a stable environment for seedling growth. Establishing a successful seagrass nursery should consider the following:

- ◆ **Tank size:** Almost any size tank can be used to grow seagrass seedlings.
- ◆ **Water Quality:** Salinity should remain between 25–35 PSU.
- ◆ **Lighting:** Outdoor nurseries should receive 50–100% natural sunlight. Indoor setups may require full-spectrum LED grow lights on a 12:12 to 8:16 light:dark cycle.
- ◆ **Temperature:** Maintain water temperatures between 20–30°C.
- ◆ **Filtration:** Provide gentle to moderate flow to minimize bacterial growth and prevent anoxia.



Seedling Planting Techniques

Once the seedlings have developed initial blades and roots, they can be planted within the greenhouse. Gently insert the seedling into the sand, making sure the blades are exposed.



Seedlings should be planted into a sand mixture similar to sediment at the outplanting site. A thin nutrient layer with peat or fertilizers can be included to maximize growth potential.

A variety of different containers can be used to plant seedlings. We suggest using either 4-in² plastic plant pots or 9 x 15 x 3-in² plastic trays. Pots are easier to handle, while trays can create dense root mats.



Outplanting Techniques

After approximately 8 months of growing in the nursery, the young plants are ready for planting. Ensure you have proper permitting & a suitable location for outplanting seagrass. Store planting units submerged until the outplanting site is reached to minimize air exposure.

Gently invert the pot/tray to remove the plant and, using a trowel, dig a small hole to place the plant. Be sure to place as much sediment from the planting unit in the ground as possible. Secure the planting unit into the ground with 3- to 4-in metal yard staples.

For more information, read the full report “Nursery-based restoration of *Thalassia testudinum* using beach-cast seedlings: Lessons learned and Recommendations from Wolf Branch, Tampa Bay, FL” at tbep.org, or visit:

<https://myfwc.com/research/habitat/seagrasses/seed/>

Questions? Email:

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