

Meeting the Demand for Coastal Plants

... from a grower's perspective



Joe Hayden, Native Nursery Manager

Erik Sandsmark, VP of Operations

EarthBalance has over 30 years of experience

Harvesting, Growing, and Installing beach plants

Company profile

- 100% Employee Owned
- Established in 1985
- Headquarters in Florida
- Two native nurseries
- Federal Contractor



Core Competencies

- Beach and Coastal Restoration
- Nuisance/Exotic Vegetation Removal
- Upland/Wetland Maintenance
- Native Plant Nursery
- Native Plant Installation

Agenda

1. Sea Oat/Beach Plant Production
2. Increased Demand
3. Plant Availability
4. Plant Specifications
5. Complexities of Growing
6. Demand, Delays, and Deadlines
7. Summary and Q&A



Dauphin Island, AL 700,000 beach plants

It all starts with sea oat seeds ...

- Seeds ripen in Sept - Oct
- 4-week harvest window from natural beaches
- During hurricane season
- Need access and permission
- Viability/Germination
- Seed can be stored for several years



Sea Oats are greenhouse grown



- **Liner or 2" plant**
- **Plants installed about 6 – 8 inches deep**
- **Typical 1 inch of root growth in the first week**



Increased Demand and Availability

- Demand has increased by 67% in the past five years.
- Beach plants are only grown in large quantities when there is a project.
- Large quantities of beach plants are not commercially available.
- Nurseries need to have seed stored and access to harvest sites.



Mix of Species

Project specifications have shifted towards a more diverse mix of beach species

Species Mix

Grasses (sea oats, Panic grass), beach elder, and railroad vine have different requirements



Space Requirements and Regional Specifics

- **Space Requirements** – Growing multiple species simultaneously required large amounts of nursery space
- **Height and Container Size** – Plant heights and container size very depending on project specification.
- **Regional Starter Material** – Project specifications requirement documentation for specific regional see and starter material



Planning and Complexities

- Managing inventory for multiple projects
- Time of year for growing native plants
- Winter – cool/cold temps less daylight – plants grow slower
- Summer – avoid starting in hot and high humidity



Demand, Delays, and Deadlines

- Accelerating construction schedules
- Planting delays due to environmental conditions or construction delays
- Implications to nursery space with delays and holding plants
- Turtle, shorebird nesting, and beach vacationers' seasons



Examples



North Ponte Vedra, FL

1,225,000 Plants



Dauphin Island, AL

700,000 Plants

Tybee Island, GA

This project was awarded one of the American Shore and Beach Preservation Association Best Restored Beaches for 2020. They write "The Tybee Island Beach and Dune Restoration Project, Tybee Island, Georgia, increased their resiliency to flooding events while enhancing the natural habitat, including federally protected sea turtle nesting sites and endangered bird species, that is so vital to the environmental and economic health of the city. It is the first time the City built dunes as an integral resiliency feature augmenting a federal beach nourishment.



92,087 plants

Summary

- Nurseries do not have millions of beach plants ready to plant
- No beaches can be restored without access to seed and cuttings
- Excess seed supply is essential in case of storm damage to harvest sites
- Consider timing when planning for adequate growing time
- Ask growers for input during project planning



Port Everglades, FL 70,000 Mangroves

Questions?

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