Sea Oats

COLLECTION, CULTURE AND PLANTING

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This species helps to stabilize beach dunes by capturing windblown sand, and resisting wave scour during storms with dense fibrous interconnecting root mass.


one season after install

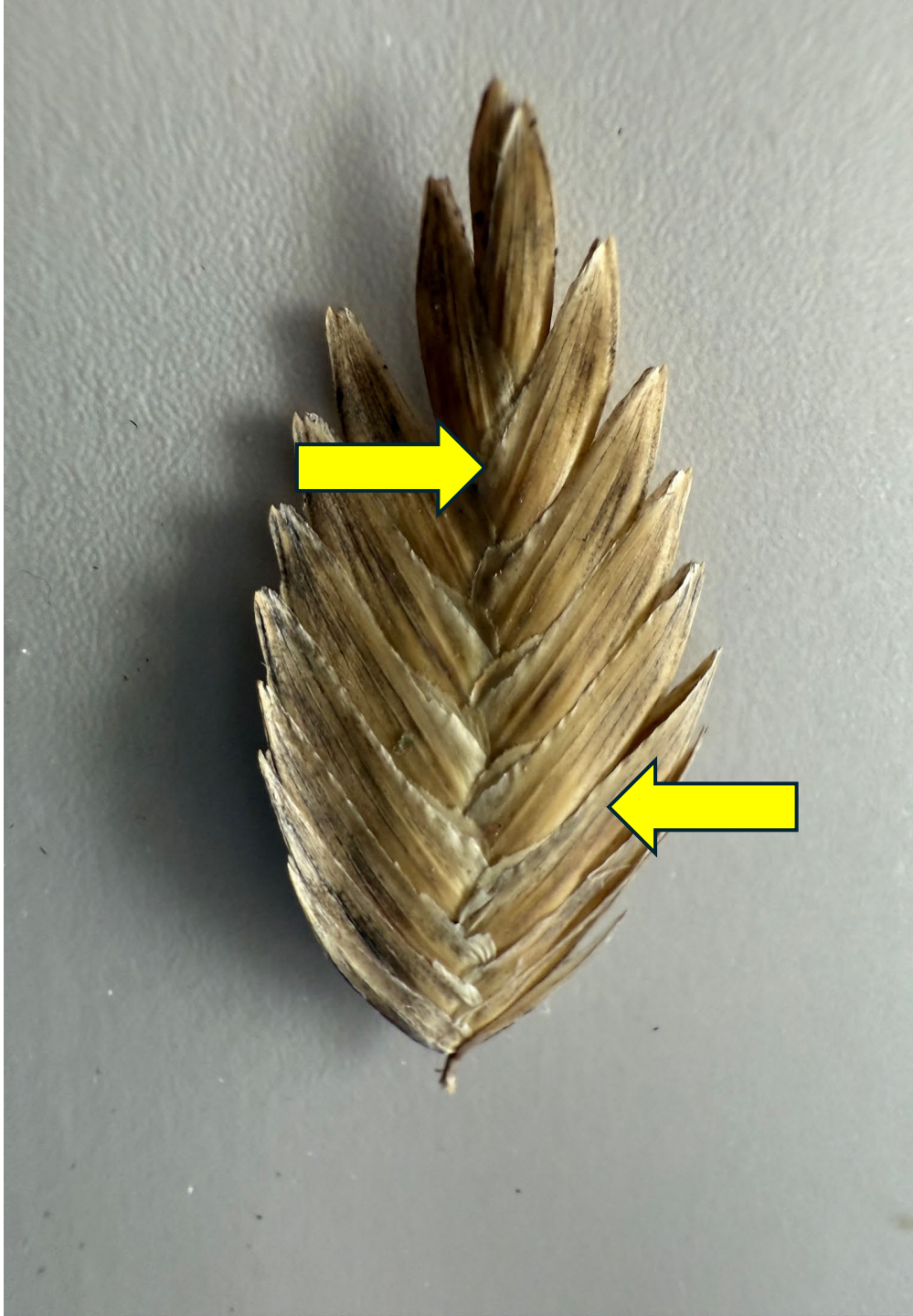

Dense, deep roots resist wave scour

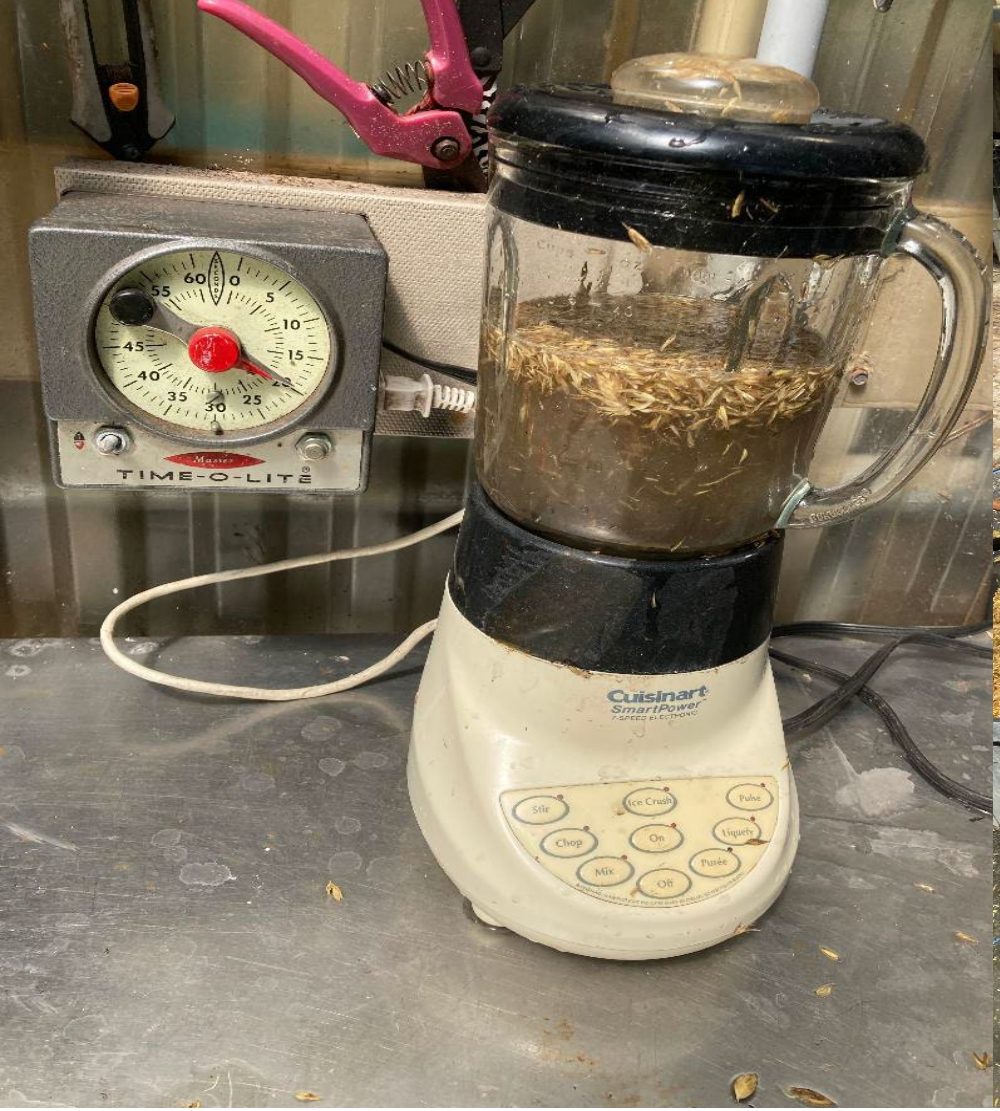

Windblown sand capture has buried 42 inch post and rope pedestrian barrier

EVERYONE KNOWS YOU CAN'T PICK SEA OATS

EXCEPT.. When you have permission of the property owner, public or private. Fl. Statute 370.041

This is called a spikelet.. one of maybe 100 or more on each seed stalk.
In a really good year with lots of rain and no midsummer storms to shake them up, there might be five or six actual seeds in there, but it looks like there’s probably only two in this one.





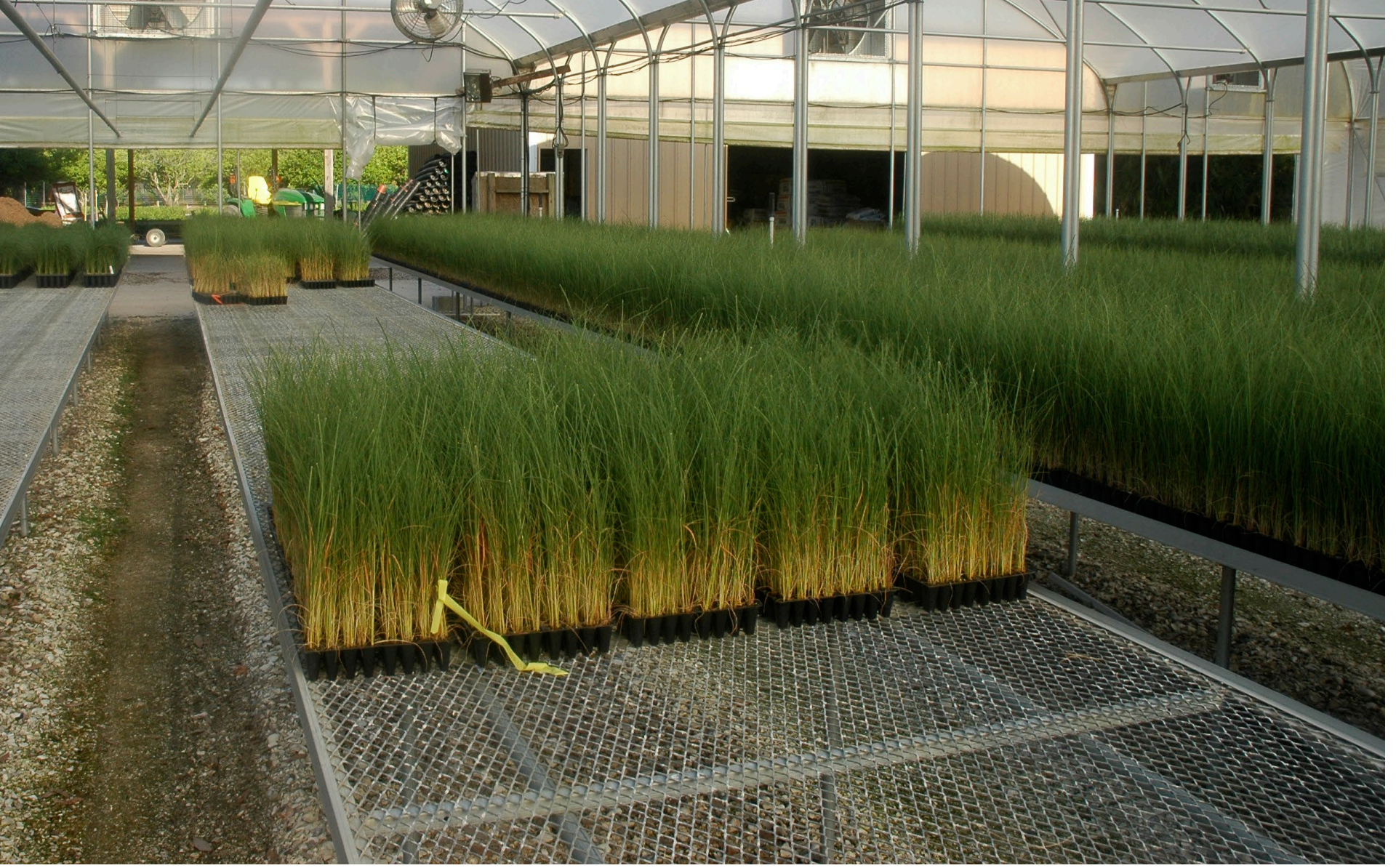
Small volume processing can be done locally because seed itself sinks, when separated from the spike.

High vol..F.W. Schumacher <treeseed@capecod.net>

We rinse cleaned seed in peroxide, then thoroughly dry and refrigerate to store long term.

Pound of seed (3/4 quart jar) grows 10K to 15K liner plugs.


Grown in greenhouses purpose built for sea oats



10 to 14 weeks to grow a marketable crop. Full control of cultural conditions is essential.

A.. 50 cell cone hard to kill.. 5”

B..96 cell liner w two seedlings (typical public bid project)

C..72 cell liner w five seedlings. Installed in the Bathtub Beach Project

50 cell tree cone is our favorite upsize.. equal to 4 x 4 inch container, but much more compact to ship and needs less bench space to grow.
Once planted, will catch up with 1 gallon in a few weeks.


96 cell
4 inch
We ship to site and store in grow containers in order to minimize pre planting stress

Commonly shipped in boxes of 400 to 500. Should order for shipment first of the week so they don’t set in the dark box over the weekend. Open up to breathe upon arrival.


WAHOO!! WE'RE HOME!!
roots after one week at jobsite

Dune Construction..

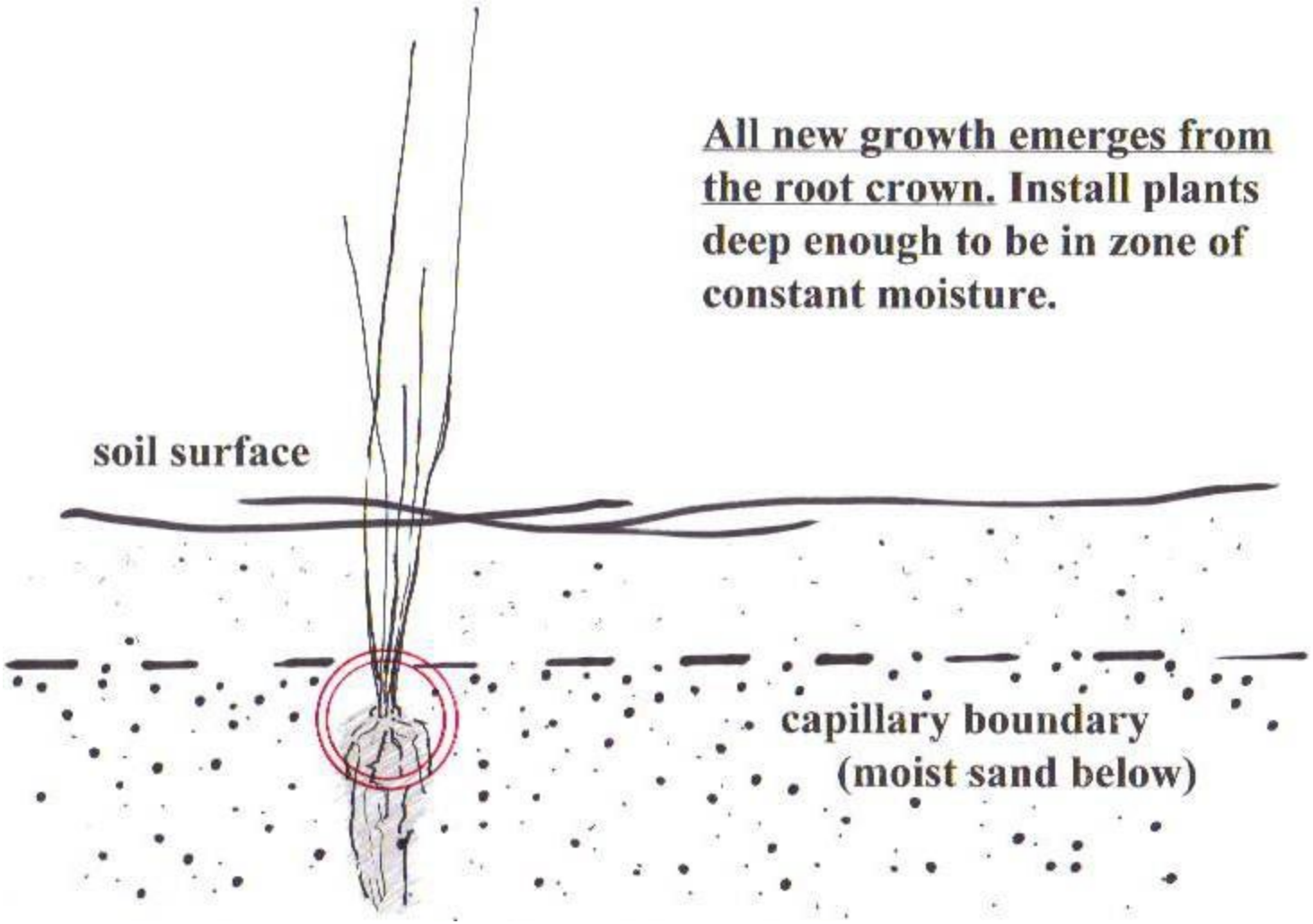
HOW IS IT DONE?

1000 PLANTS / MAN / DAY

This is a great day for planting… Rain last night and the sand is plenty wet. In dryer conditions, slower to plant them deep

We like to water the plants in at install, set roots especially when the sand is dry. This gizmo pumps water up to 2/3 mile from the parking site Same amount of water as hauled in for the gel.

Irrigation is not necessary…IF



Top of rootball minimum 6 inches below grade

1 Lowes Bulb Planter. 2 Battery drill with Home Depot planting bit. 3 Hose end jetting tool. 4 Sink drain 24 inch J tube. 5 Lowes Bulb Planter with EMT pipe extension. 6 Welded steel 2.5 inch square planting spike. 7 Stihl 2.5 inch planting bit. 8. Hose end jetting tool 9 Stihl BT45 Gas Auger w 2.5 Inch bit. 10 Plant Nurturing Service E-Z Feeder fertilizer injector. 11 Stihl BT45 Gas Auger w 5 inch Stihl planting bit.

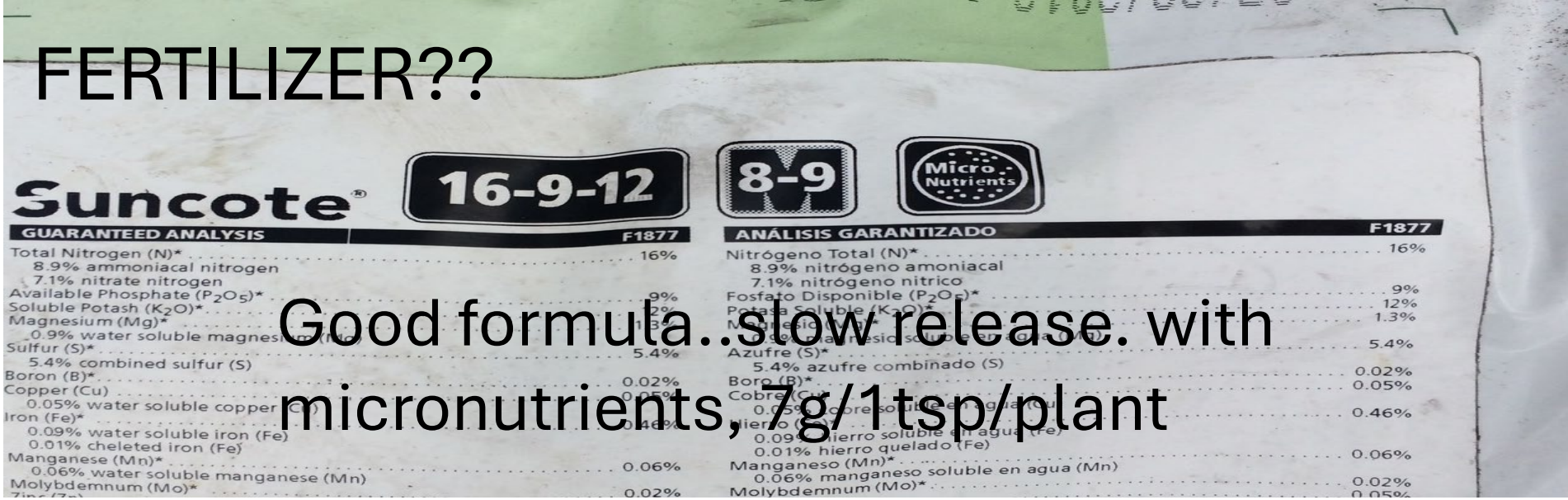
Fertileeze tool

This tool dispenses a precise measured amount of fertilizer at the rate required by the contract.
Ensures socks that the client gets what they pay for and that we don’t lose money by over fertilizing.

Available from Amazon, and pays for itself with two bags of fertilizer.

Most projects specify 18 inches on center or 4 yd.^{2} We use a net with one yard squares to make sure the client gets their correct count, and we don’t overplant and lose our margin to finish the job. Allows random natural spacing.

FERTILIZER??



Good formula..slow release. with micronutrients, 7g/1tsp/plant

Lots of conflicting debate, whether fertilizer is necessary in plants growing in a natural system.

BUT, probably just spent millions of dollars on sand for these plants to grow in.

So let's maximize performance of the last few percent of investment in the plants which will HOLD IT. They settle back to real growth quickly.

Q?? How many diapers does it take to make a dune? Hydrophilic gel spec'd as soil amendment for dune plants is similar to diaper absorbent.

Answer.. 34,374.. Approximate diaper mass equivalent of hydrogel spec'd in XXXXXX Project. One cup hydrated gel per each into planting hole.. 240,000 plants


Hydrogel test. St. Lucie job spec.
One cup gel into planting hole,
below plant. ½ tsp. fertilizer
Control test.
No gel. ½ tsp fertilizer 15-9-12
All planted Jan 1, 2013


IDENTICAL CULTURAL CONDITIONS
With hydrophilic gel on right
Without gel on left


PUBLIC BID, MARCH INSTALL
NO WATER IN, 6 INCHES DEEP
WITH GEL
PRIVATE FUNDED ADD-ON
ONE MONTH LATER, NO GEL
SAME PLANTS, WATERED IN

GELS ??

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Effect of Polyacrylamide Gel on Woody Plant Establishment in Barrier Island Swales

Deborah L. Miller[1,3], Mack Thetford[1] and Lesley W. Atwood[2]

[1] Department of Wildlife Ecology and Conservation University of Florida

No science to demonstrate value to the plant. Results in lazy roots, and benefits only the careless installer. Adds cost. This study saw no value, recommended against.

Don’t catch sand any better than plants, but degrade to create hazards and very costly to remove. PUT THE MONEY INTO MORE PLANTS..


LEAST, LIGHTEST
PEDESTRIAN CONTROL


PROJECTS..
NO TRESPASSING
VIDEO SURVEILLANCE
PRIVATE PROPERTY
NO TRESPASSING
VIOLATORS WILL BE PROSECUTED
PROPIEDAD PRIVADA


Delray Beach private homeowners began installing sea oats on the nourished beach in 1987 to restore natural function to the shoreline.

3 mile continuous system has consolidated and captured as much as 13 vertical feet in some areas. Further nourishment likely unnecessary.

Poorly sited homes require frequent repair with sand nourishment and revegetation.


GUINNESS
TOASTMASTER


Same repair project done and redone after each harsh Northeaster
Costly maintenance yet no net loss in 40 years, after five projects


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6 MONTH
GROWTH

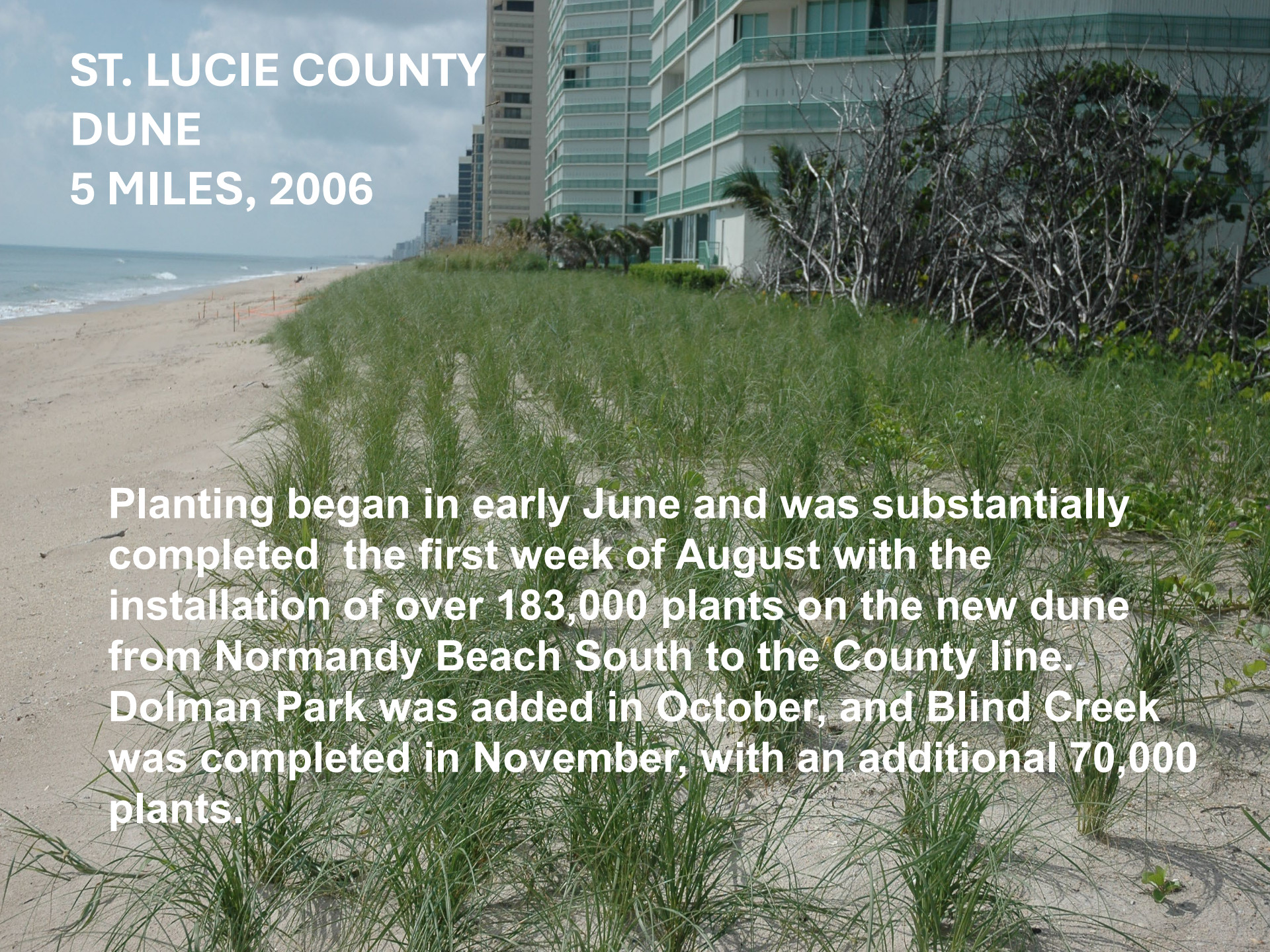

MARTIN COUNTY
Sailfish Point/Bathtub Beach
2016.
1.2 miles pioneer vegetation 30
to 50 feet shore normal.
Planted 03/2016
10.08.2016 08:34


One month after H Frances, Jeannie, 2004
Ocean Village Community
Most vegetation and about 12,000 cy sand deposited upland onto roads and parking lots.


The frontal dune planting was completed by mid March, the back dune by the end of April.


This dune was fully established by the next hurricane season, producing seed, and captured a foot of sand from H. Wilma with no damage.


OCEAN VILLAGE, 1 mile of S. Hutchinson
Planted 10' seaward of gray deck 2005
Expanded 75 feet seaward since.
+6 verticle feet



ST. LUCIE COUNTY DUNE 5 MILES, 2006

Planting began in early June and was substantially completed the first week of August with the installation of over 183,000 plants on the new dune from Normandy Beach South to the County line. Dolman Park was added in October, and Blind Creek was completed in November, with an additional 70,000 plants.

VOLUME COASTAL PLANT SUPPLIERS

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AQUATIC PLANTS OF FL… Lauren <lauren@apofl.com>

EARTHBALANCE…Ebonie <egorniak@earthbalance.com>

DUNES AND WETLANDS INC… Fernando <ortegafernando80@gmail.com>


THANKS FOR LISTENING...and please
practice redundant contraception.
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