

Strategic planting & nutrient amendments to accelerate the revegetation of rapidly retreating coastal dunes

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US Army Corps of Engineers®
Jacksonville District

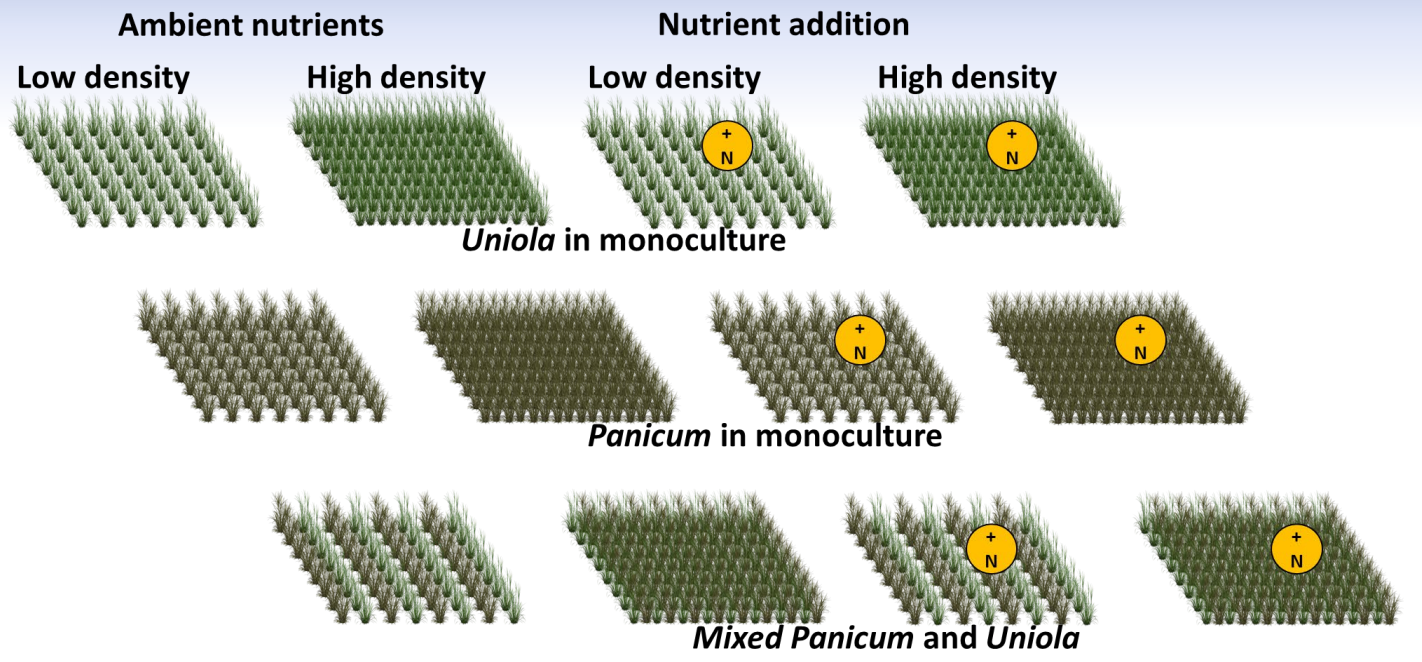
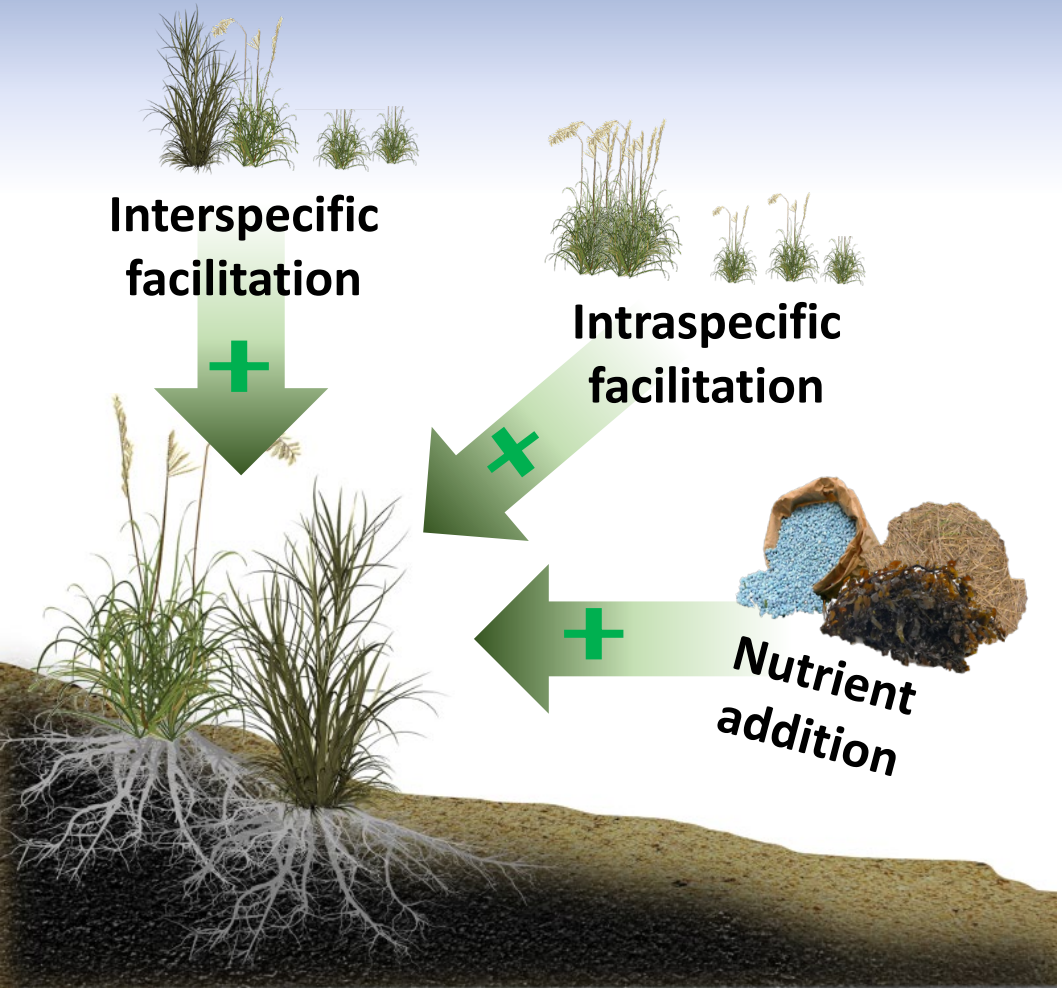
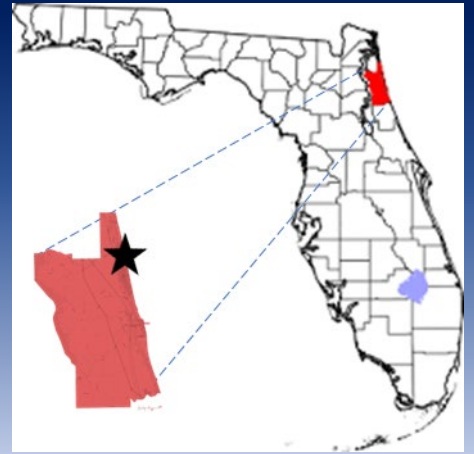





**How do we
turn this...**

**...into this as
quickly as
possible?**

How can we harness positive species interactions and nutrient addition to enhance plant growth following restoration?





Exxon
station

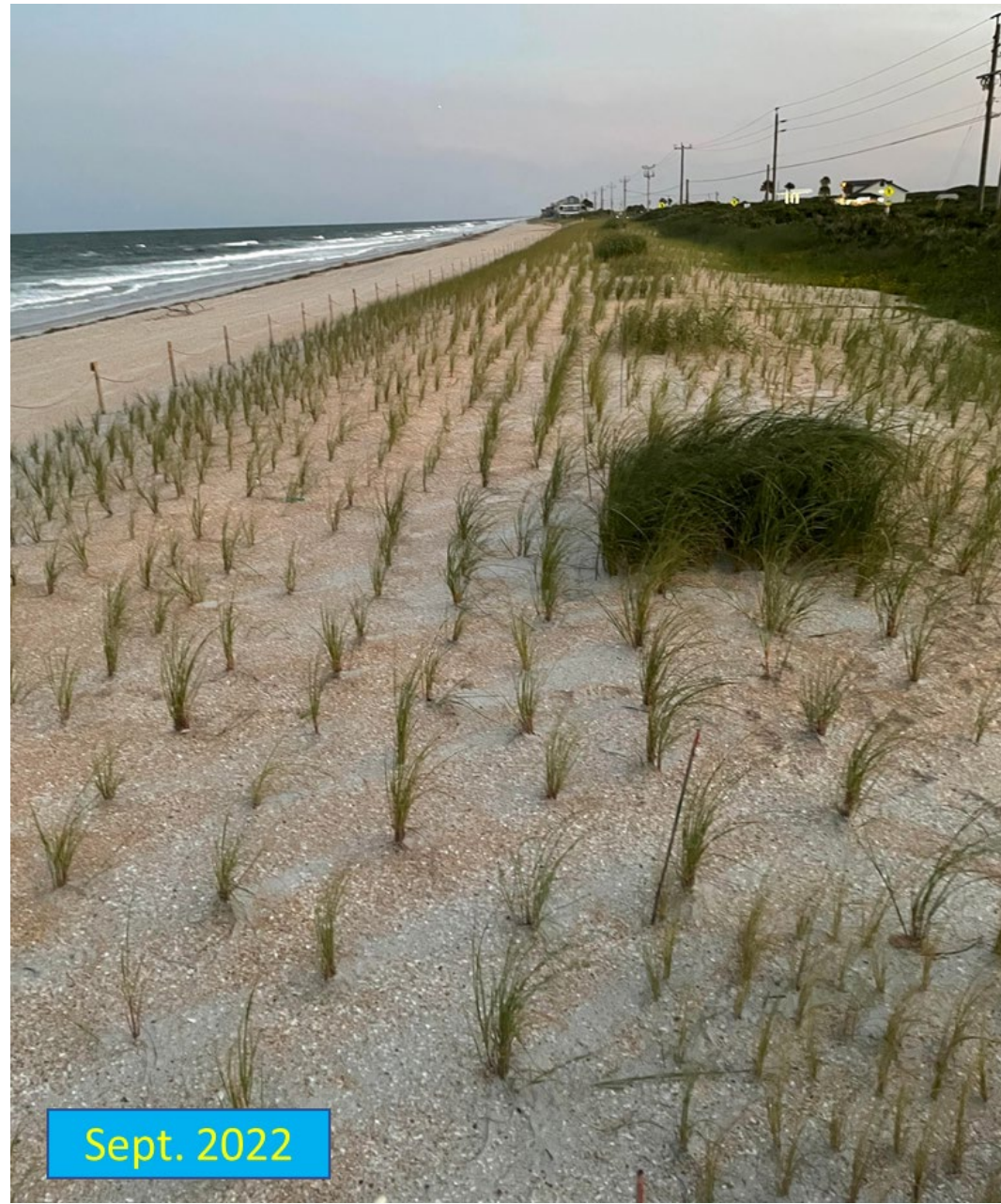
Experimental area



May 2022



June 2022



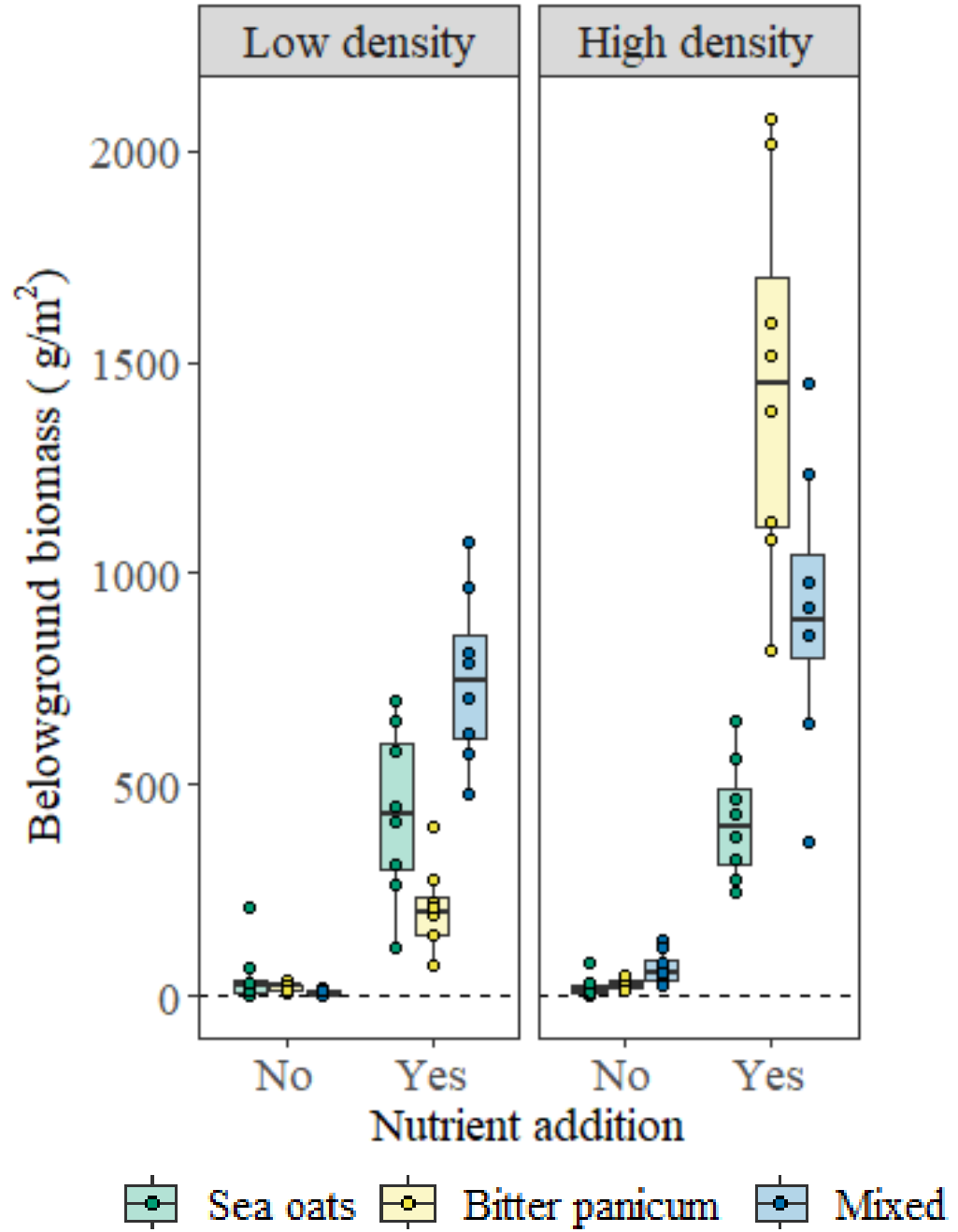
Sept. 2022



July 2022



August 2022



Sea oats + Bitter panicum

Bitter panicum

High density | Low density

High density | Low density



**Nutrient addition
interacts with
increased
planting density
to boost growth!**

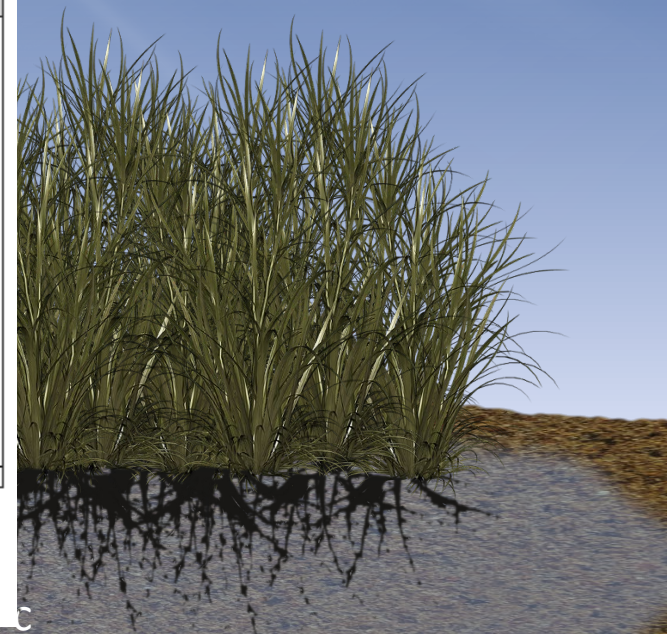
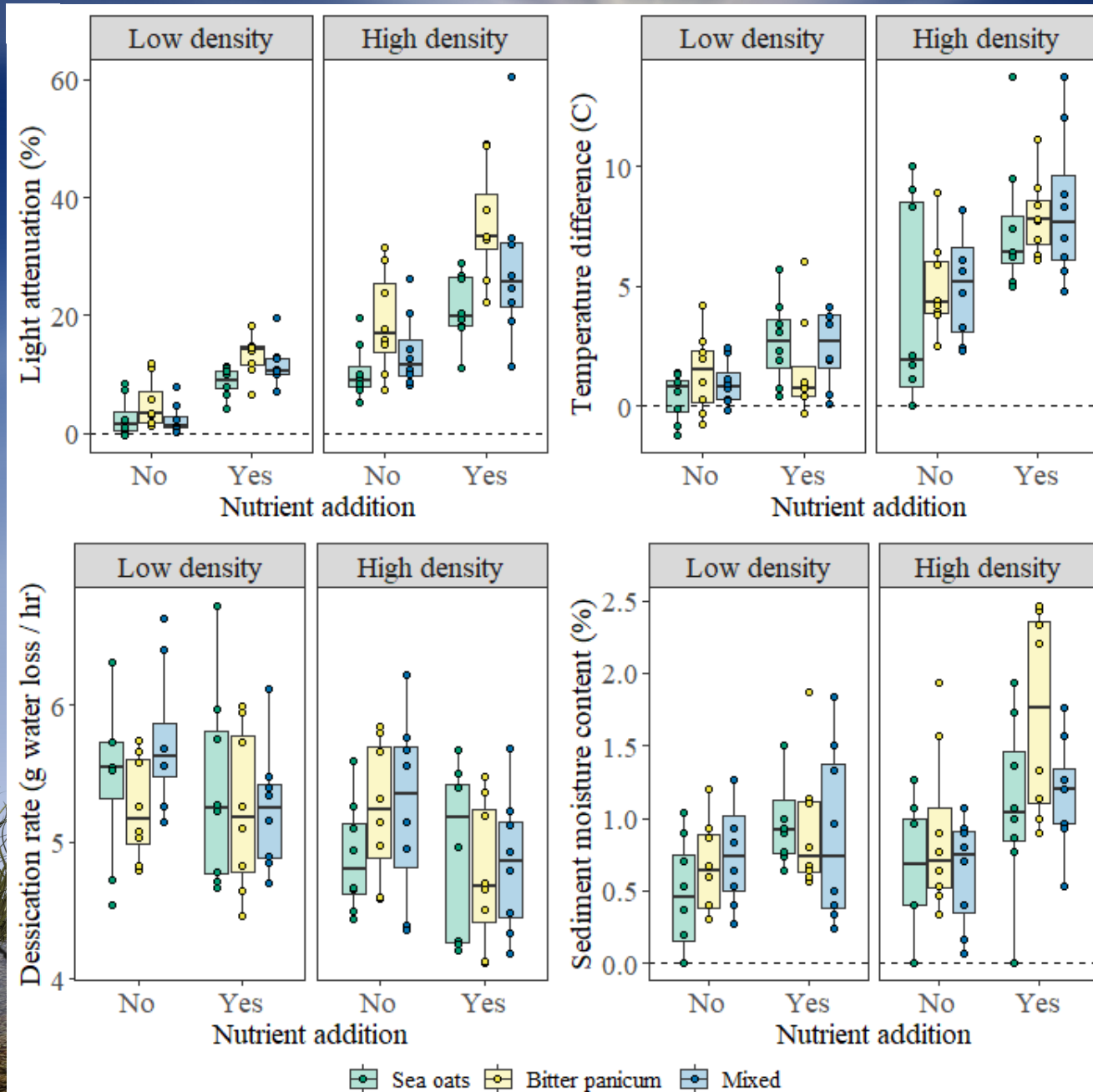
Sea oats

High density | Low density

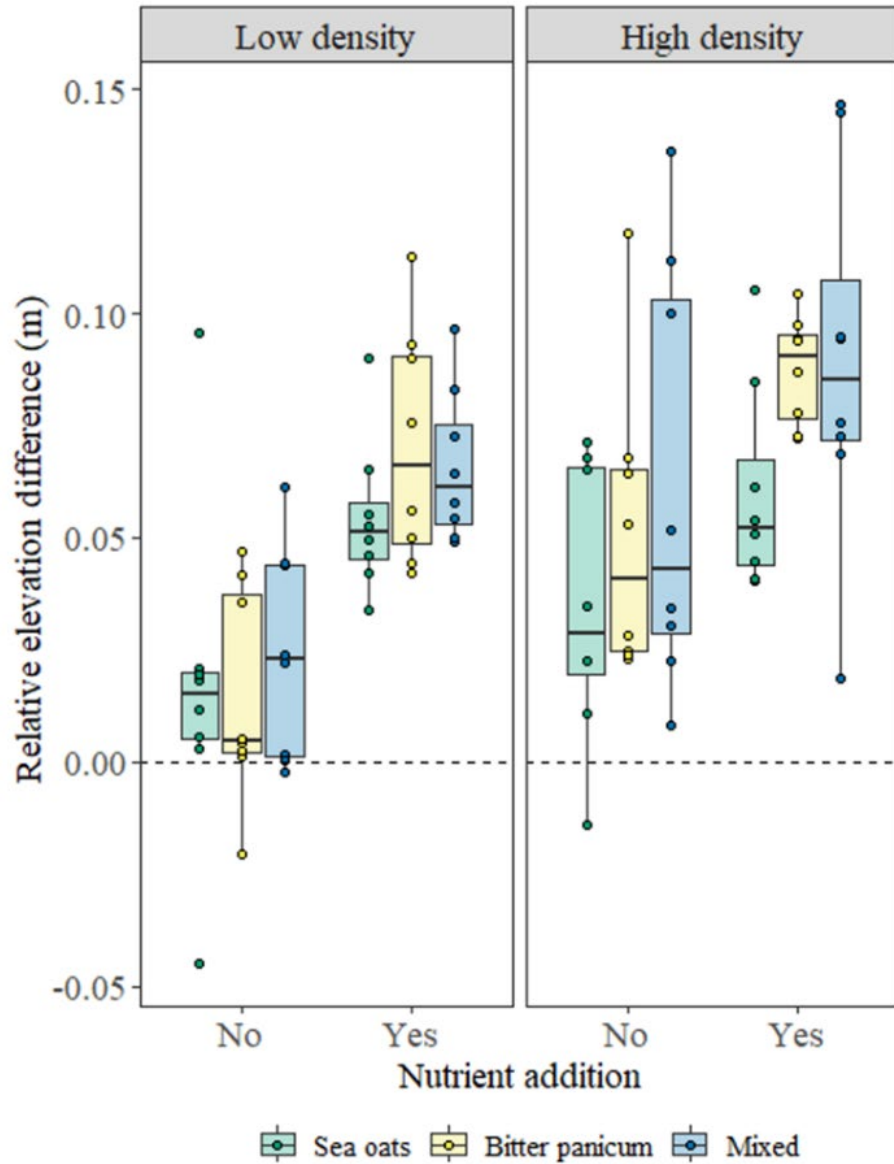
High density | Low density



Possible Mechanisms Underlying Results



Restoring ecosystem functioning: Sand Accretion





Some final thoughts...



QUESTIONS?

Bitter panicum planted at high densities with nutrient addition may be most effective for rapid dune building

