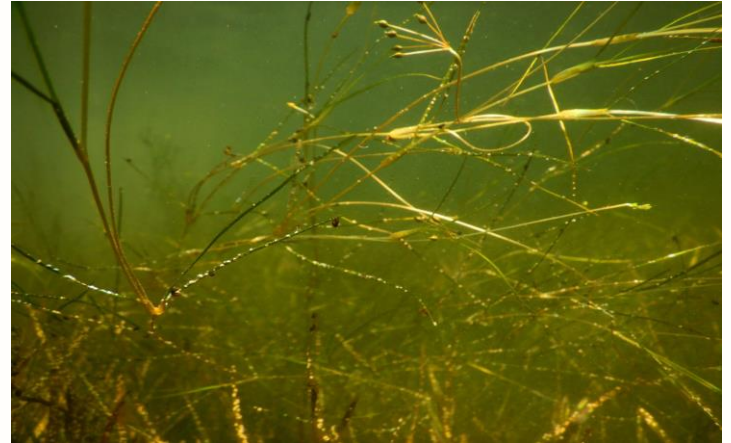


Simplifying Widgeongrass seed selection for restoration: effects of seed size and storage time on successful germination

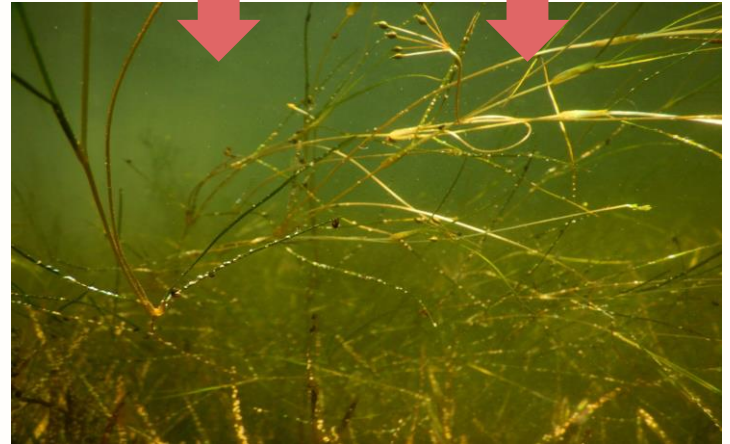
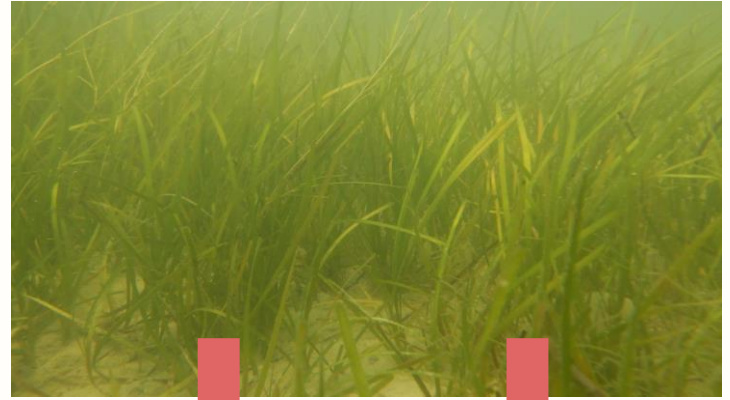
Cassidy Gersten, Alyson Hall, Christopher J. Patrick
SAV Workgroup | 10/18/2023

Seagrass Restoration in the Bay



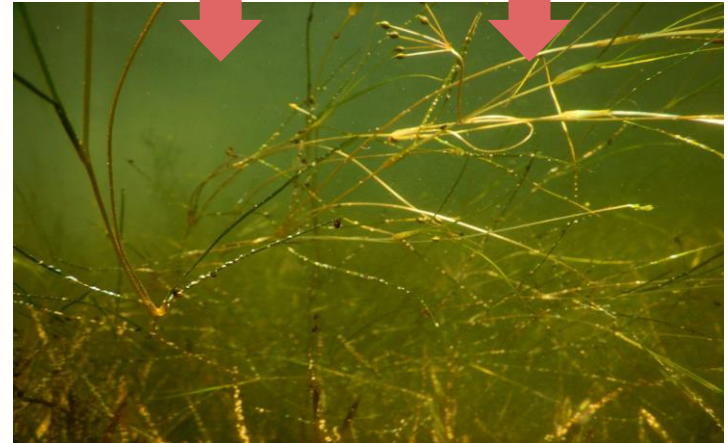
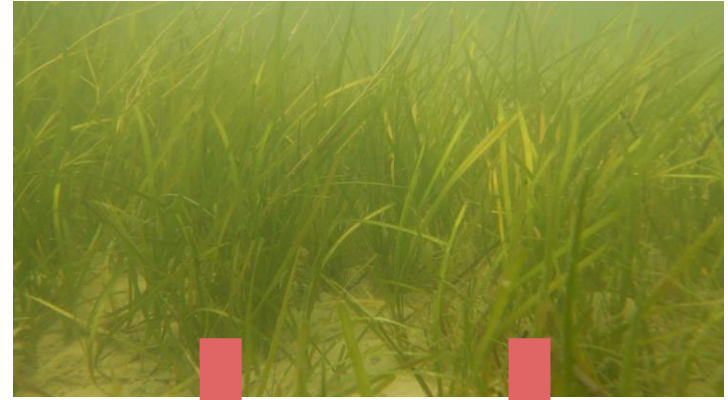
Seagrass Restoration in the Bay

- Widgeongrass is the new dominant species



Seagrass Restoration in the Bay

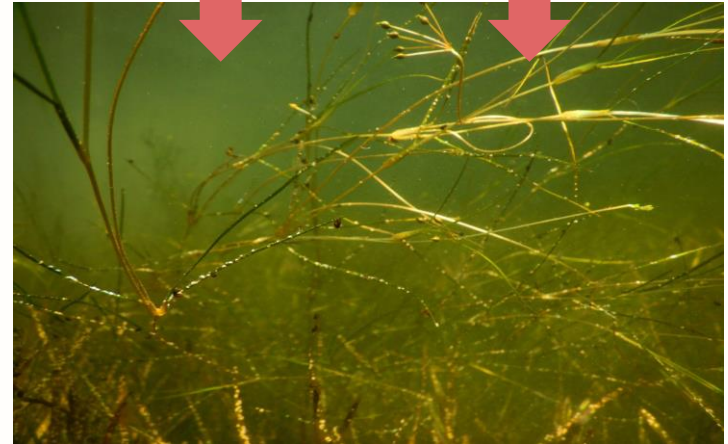
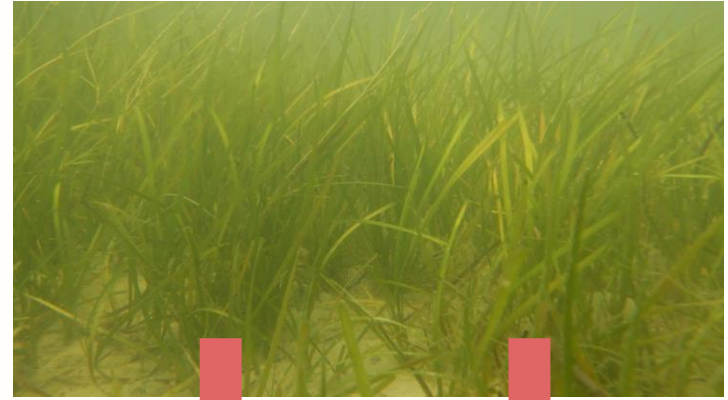
- Widgeongrass is the new dominant species
- Metrics based on Eelgrass seeds
 - Fall velocity
 - Low storage potential



Seagrass Restoration in the Bay

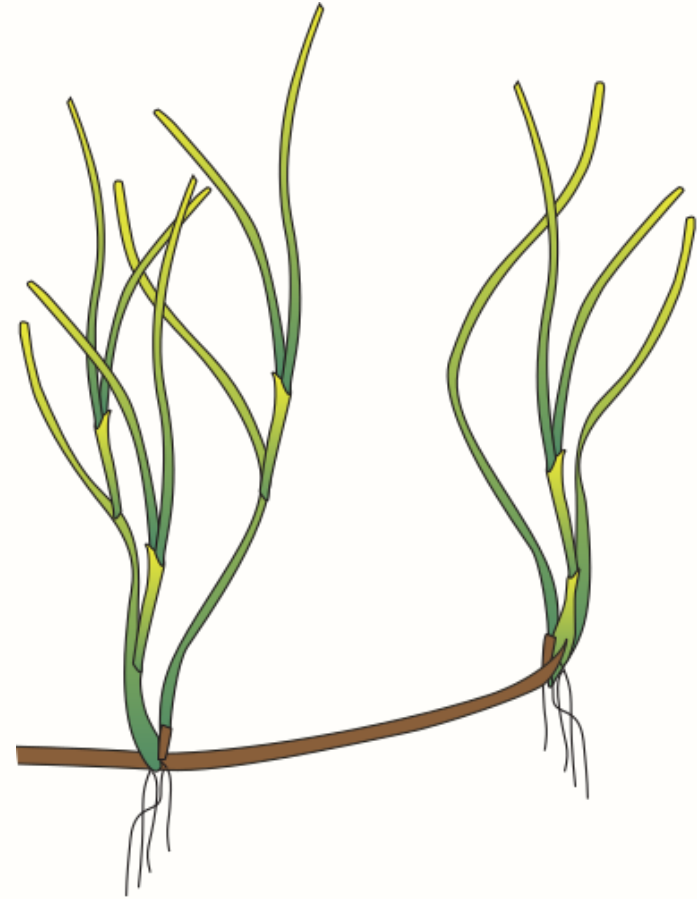
- Widgeongrass is the new dominant species
- Metrics based on Eelgrass seeds
 - Fall velocity
 - Low storage potential

How do we restore Widgeongrass?



What We Know

- Higher success when Widgeongrass is planted in the fall
- Metrics to assess seed viability for Eelgrass

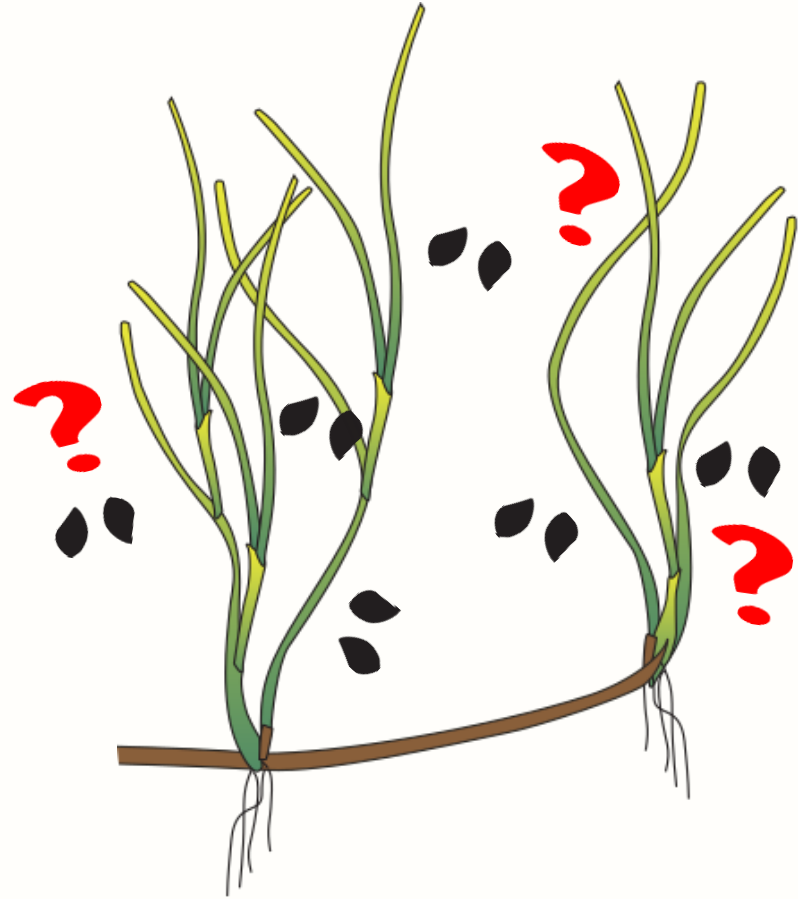


What We Know

- Higher success when Widgeongrass is planted in the fall
- Metrics to assess seed viability in Eelgrass

What We Don't Know

- Effects of cold storage
- Existing viability patterns



Assessing Seed Size & Seed Shape's Effects on Germination



Assessing Seed Size & Seed Shape's Effects on Germination

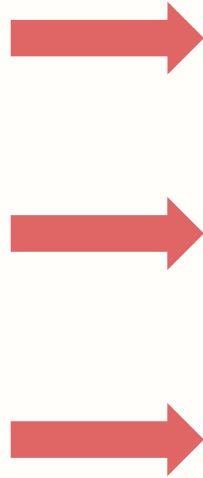


4°C & 24 hours dark

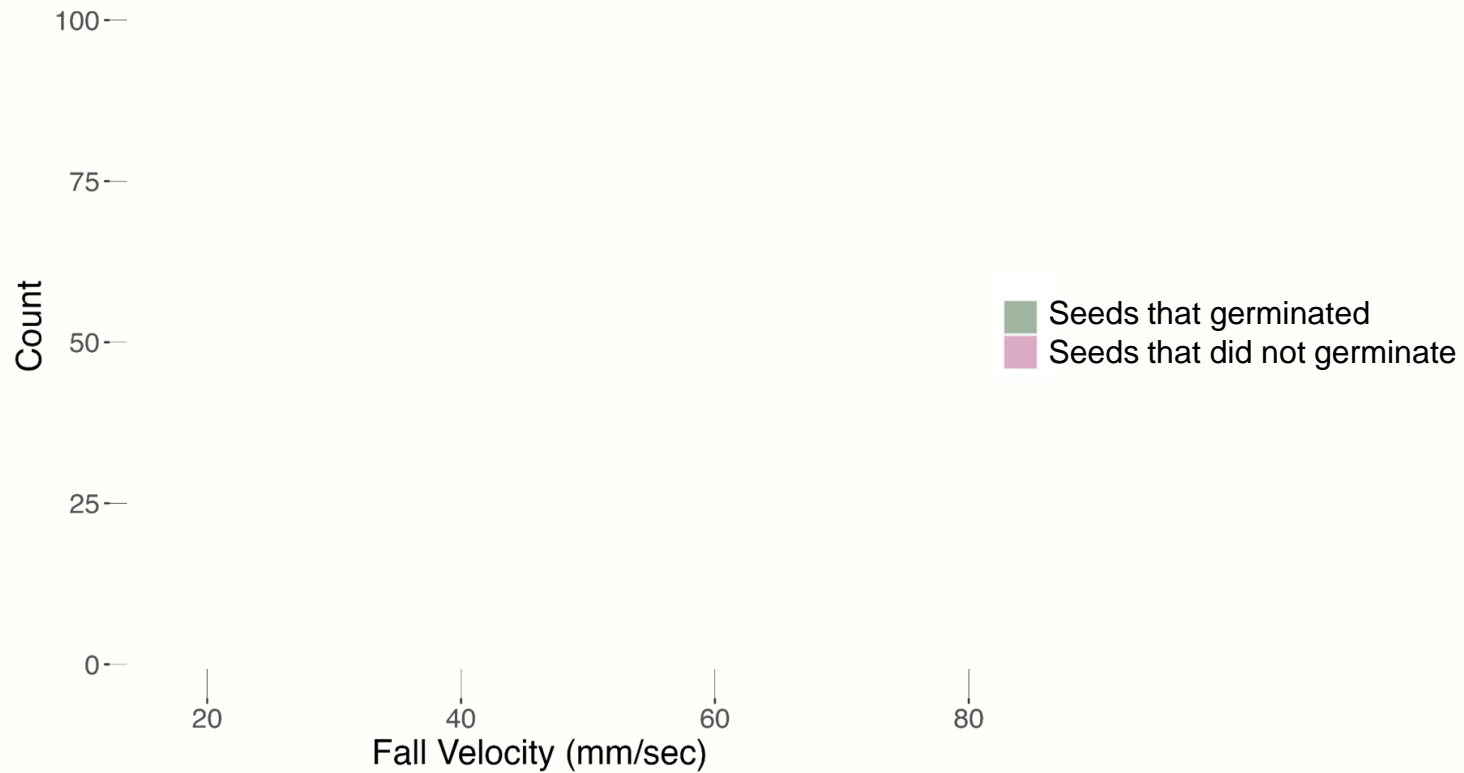
Assessing Seed Size & Seed Shape's Effects on Germination

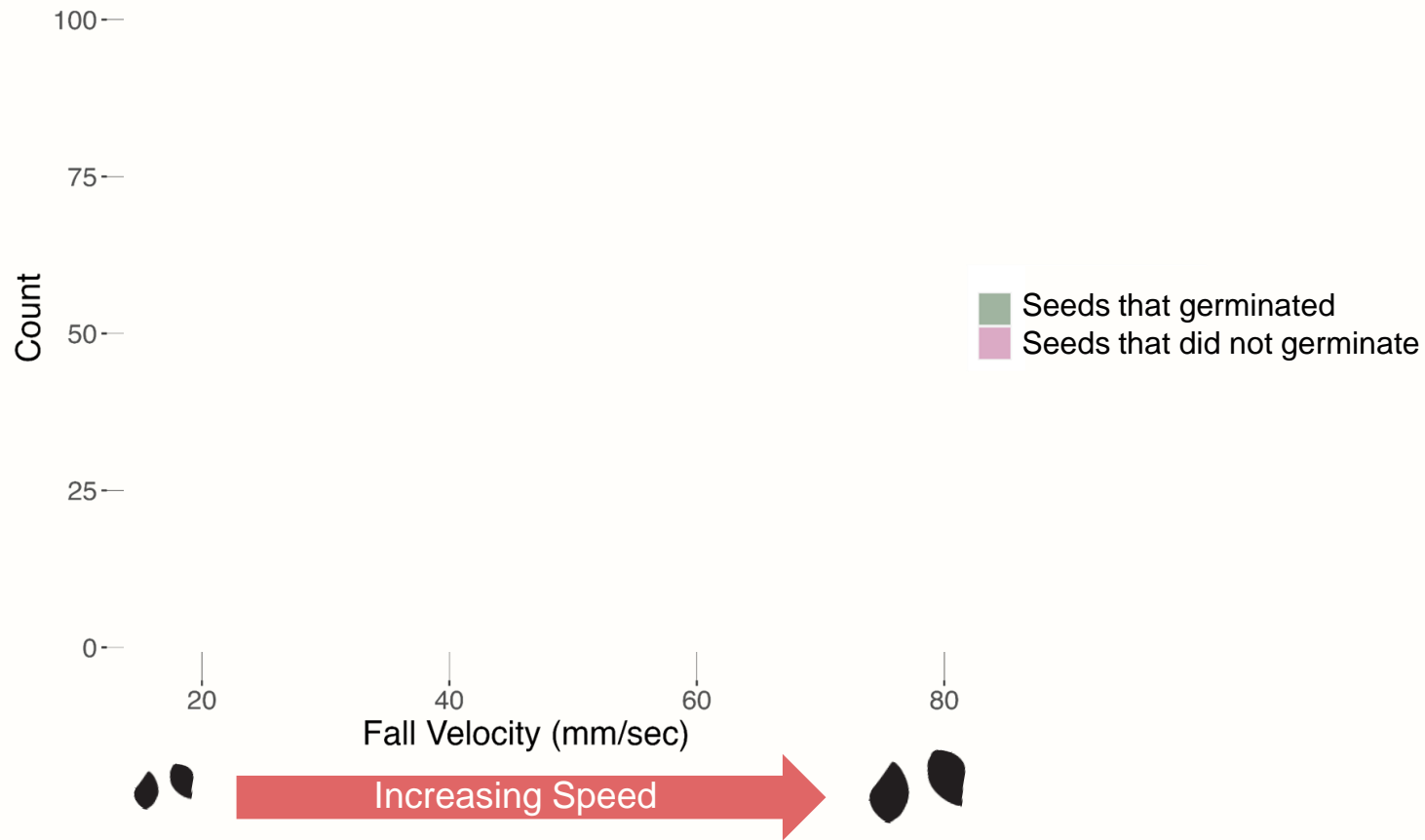


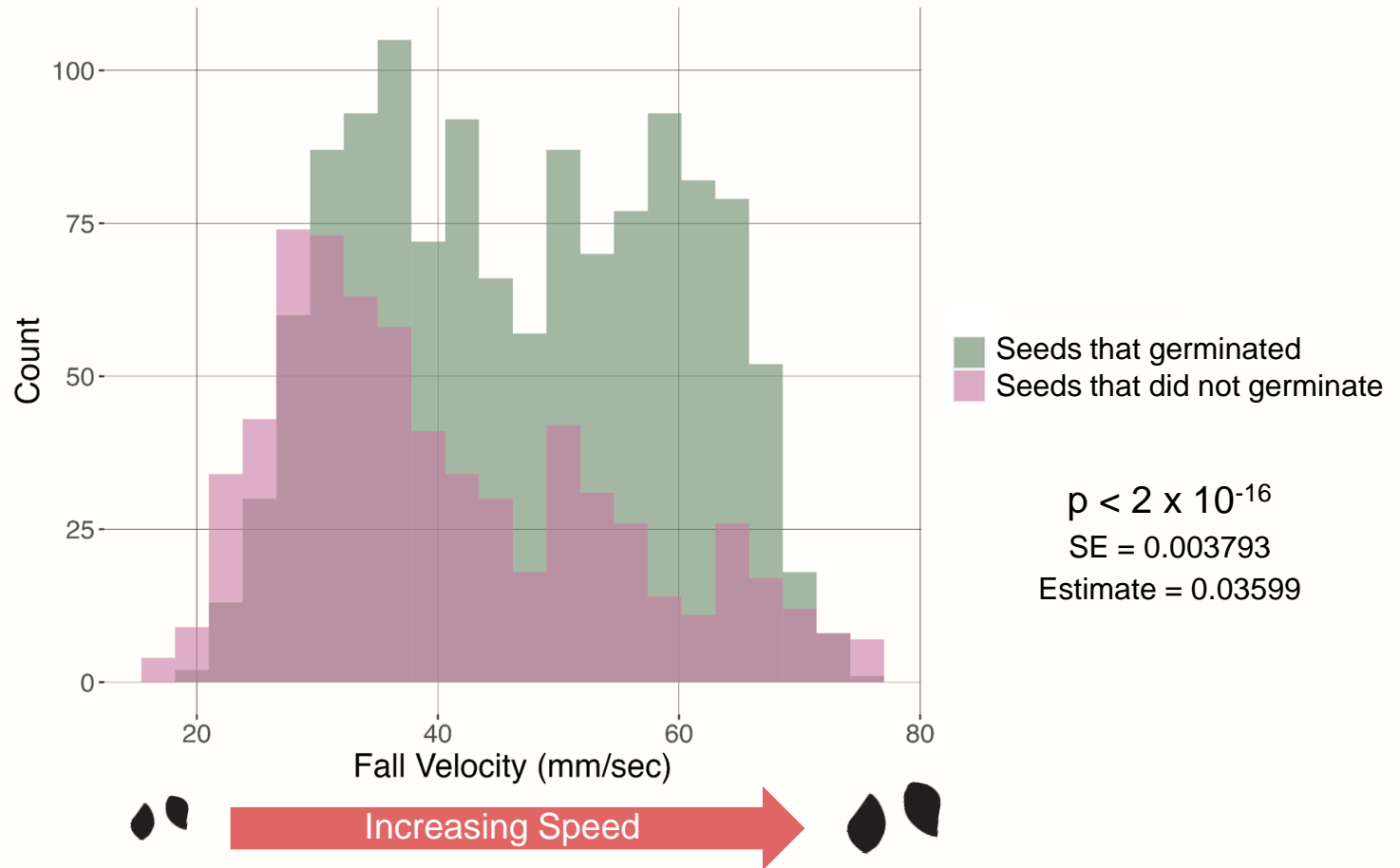
4°C & 24 hours dark



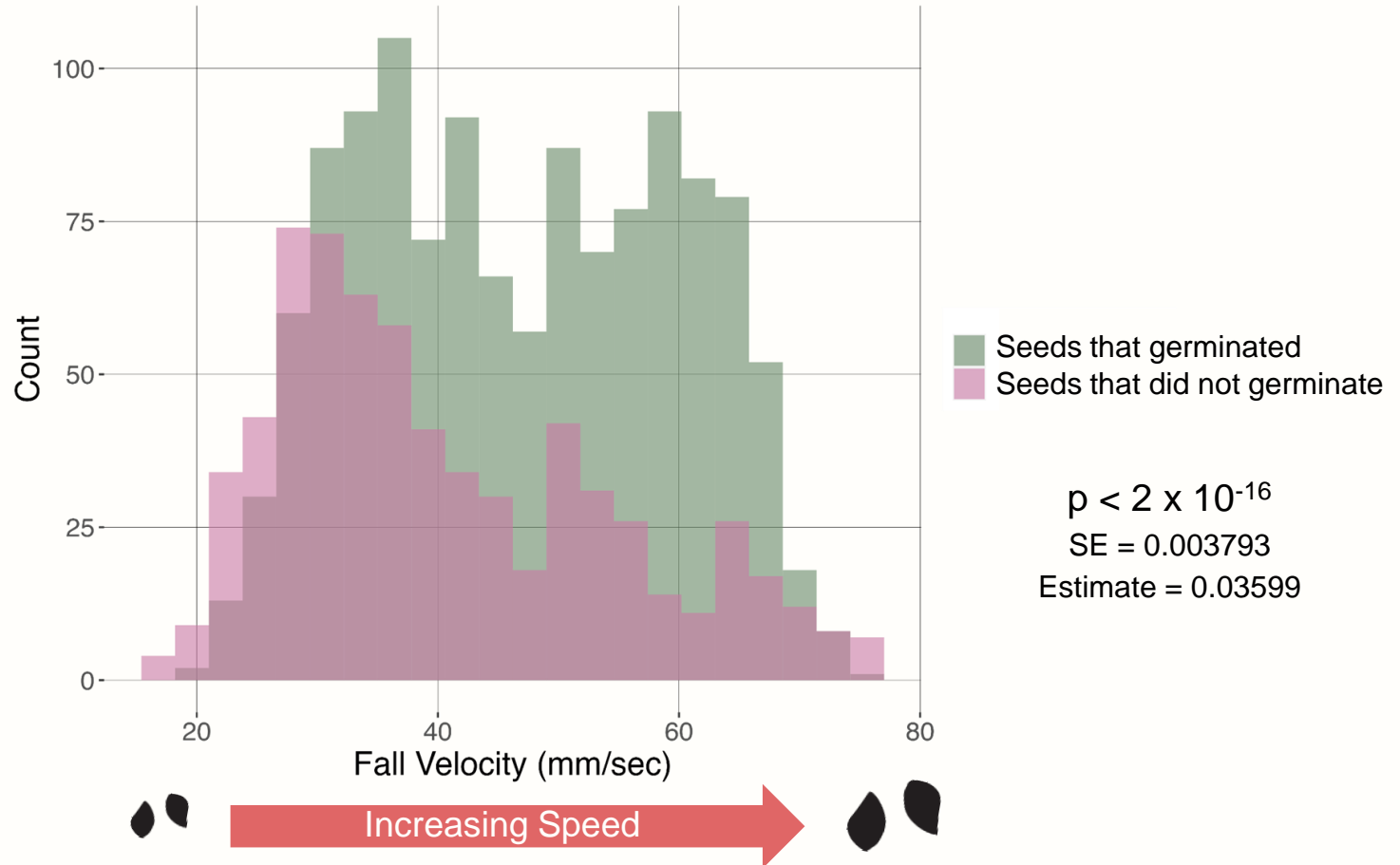
24°C & 12 hours light/dark

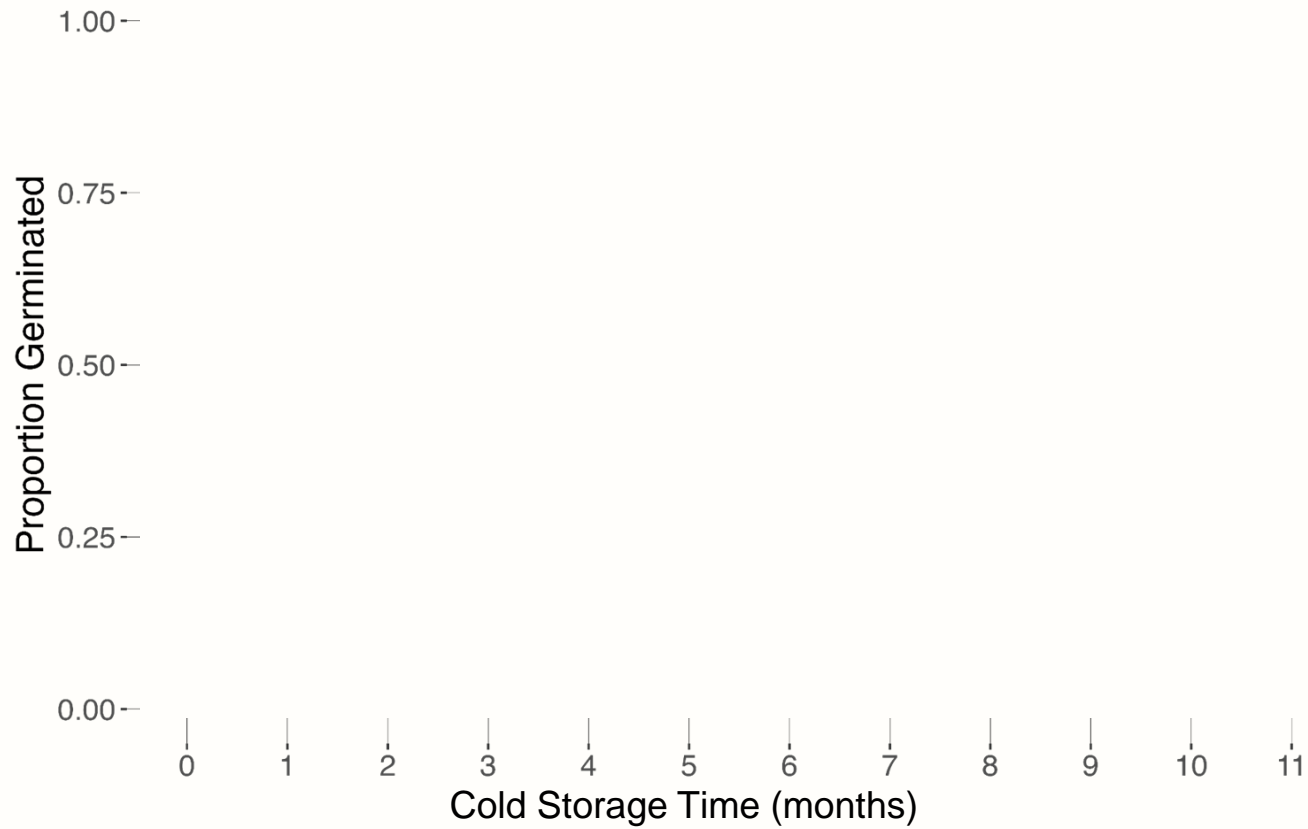


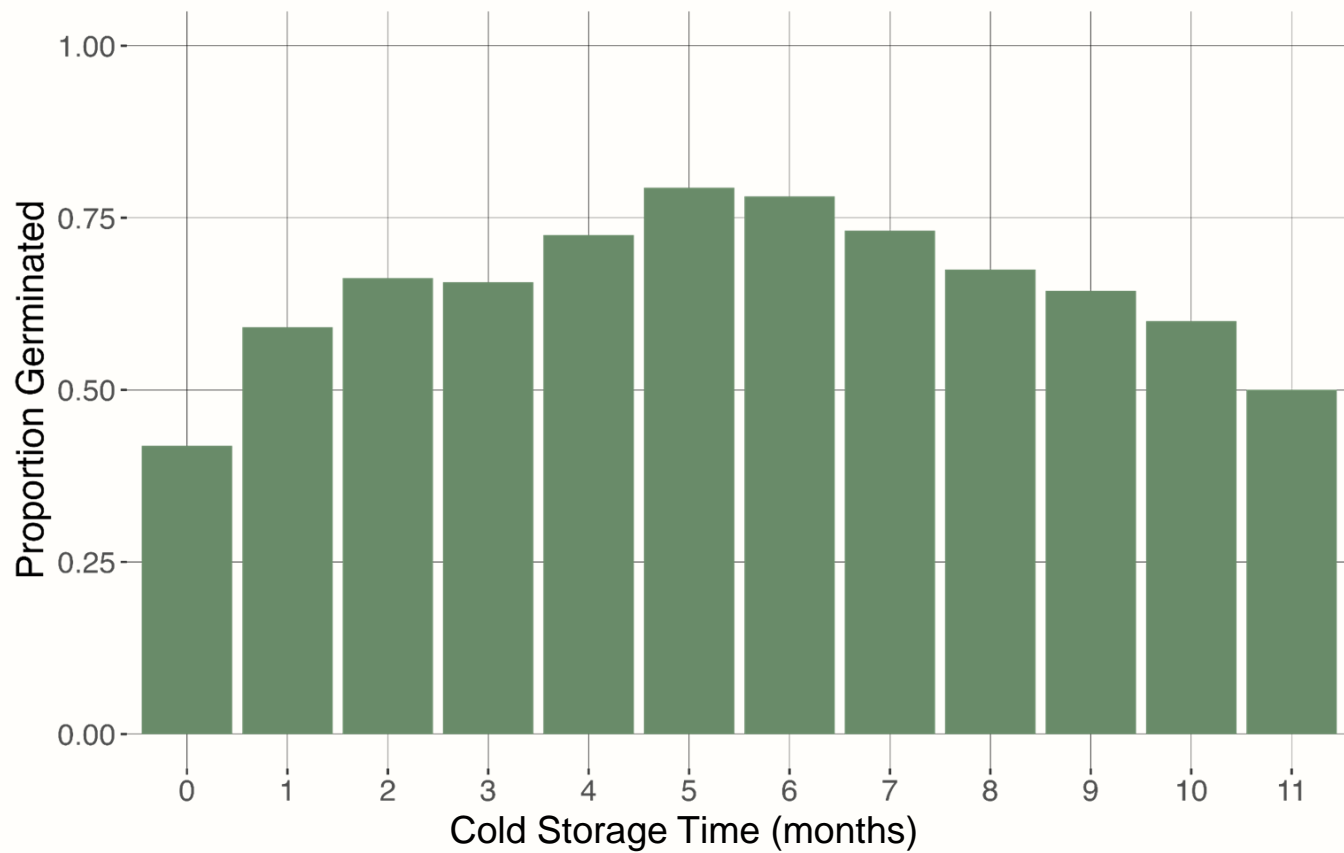




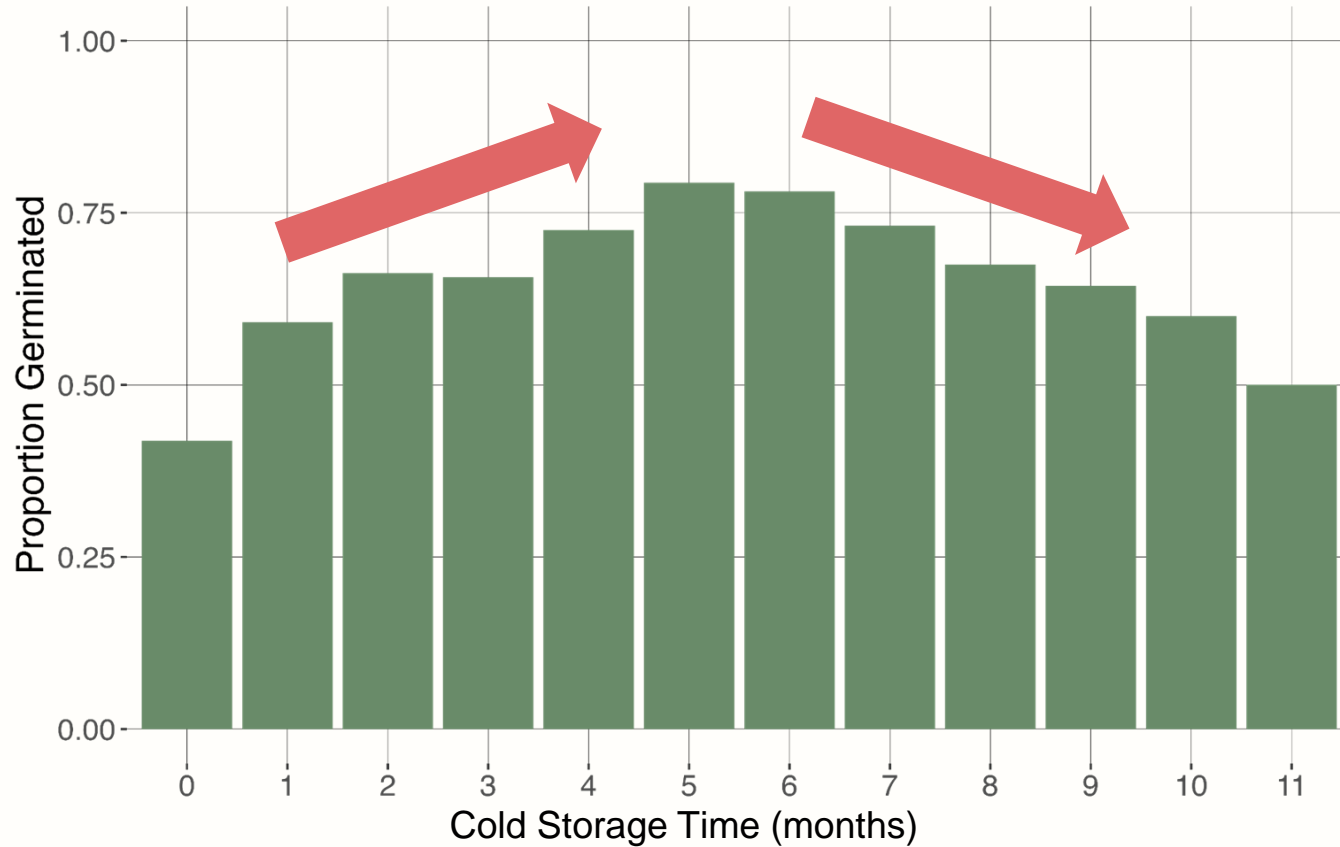
There is a Larger Proportion of Seeds That Germinate in Higher Fall Velocities



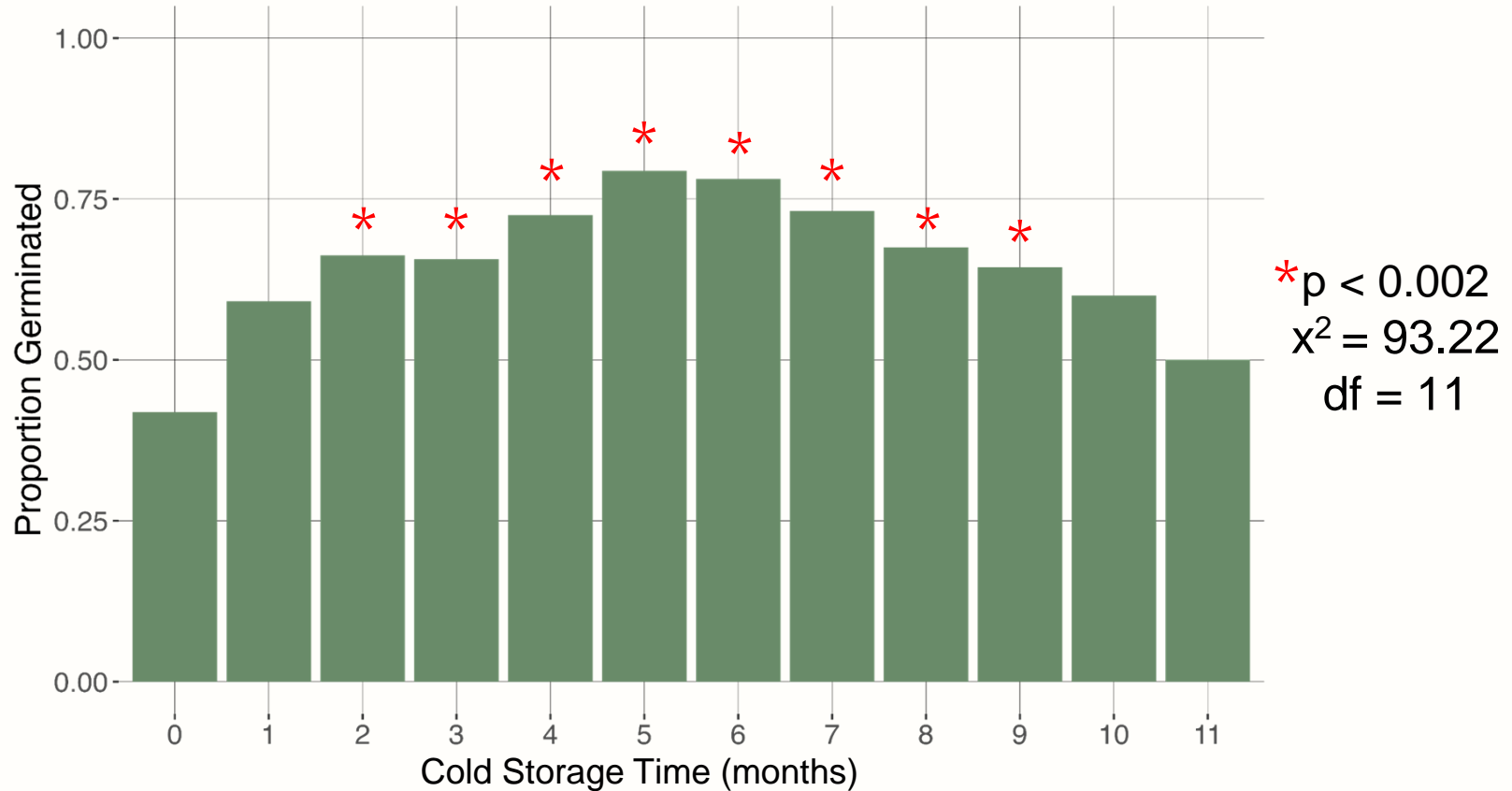




Cold Storage Increases Germination At First



Cold Storage Increases Germination At First



Expanding Wigeongrass Restoration

- Seeds can be separated by fall velocity
- Cold storage time increases germination
20% - 40%



Expanding Widgeongrass Restoration

- Seeds can be separated by fall velocity
- Cold storage time increases germination
20% - 40%



💧 Questions? 💧

Acknowledgements

- My advisor, Aly Hall
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- UMCES Media Library



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& MARY**

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Let's Chat!
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