Rice Stem Borer Management

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Louisiana Agriculture Technology and Management Conference

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Stem borer complex

Sugarcane borer
Diatraea saccharalis

Mexican rice borer
Eoreuma loftini

Rice stalk borer
Chilo plejadellus

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Stem borer injury in rice

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Stem Borer Management

- Larvae infest rice from late tillering through heading
- Larvae feed in leaf sheath before entering stem
- Once white-heads are present, losses have already occurred

Stem borer injury to leaf sheath

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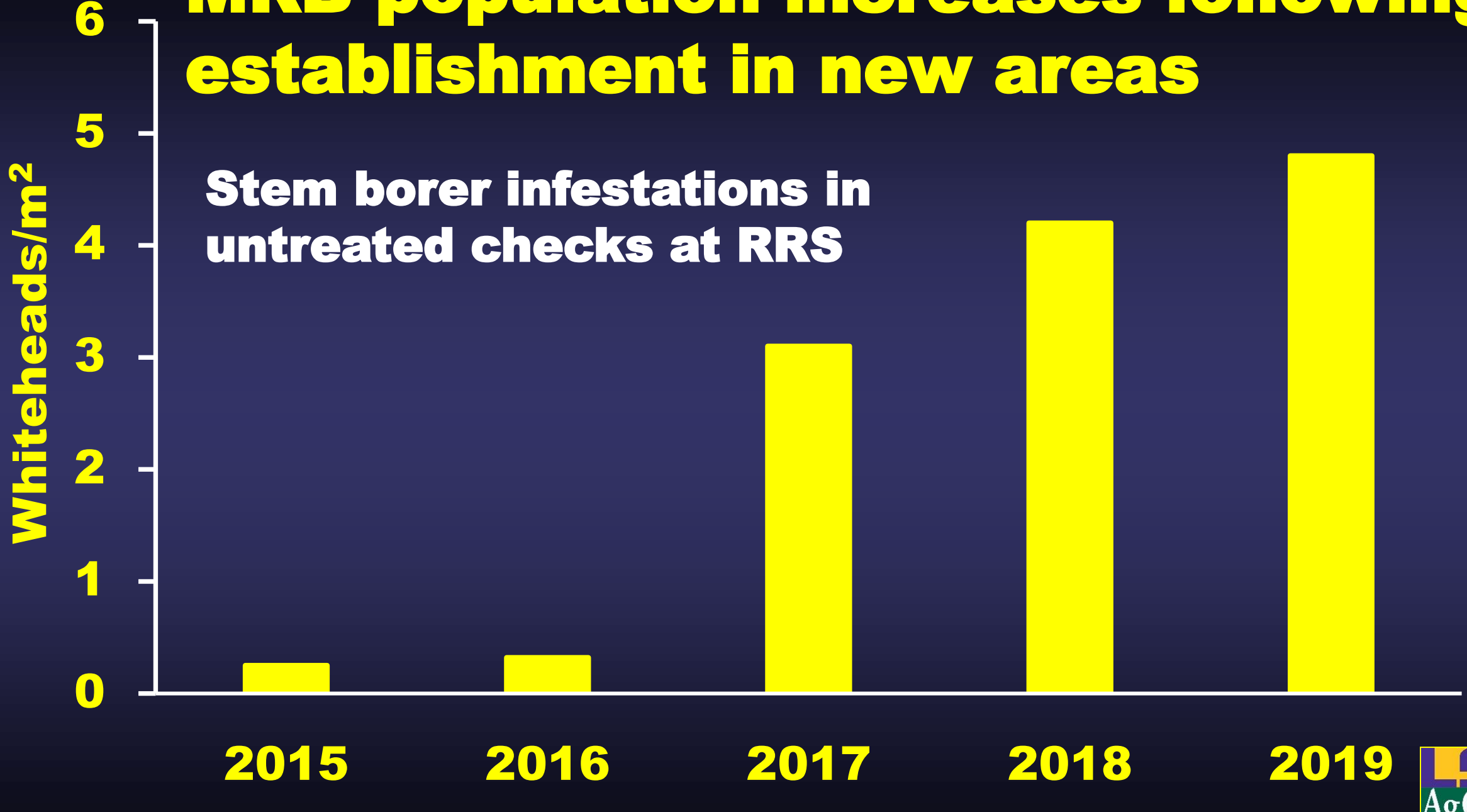
MRB population increases following establishment in new areas



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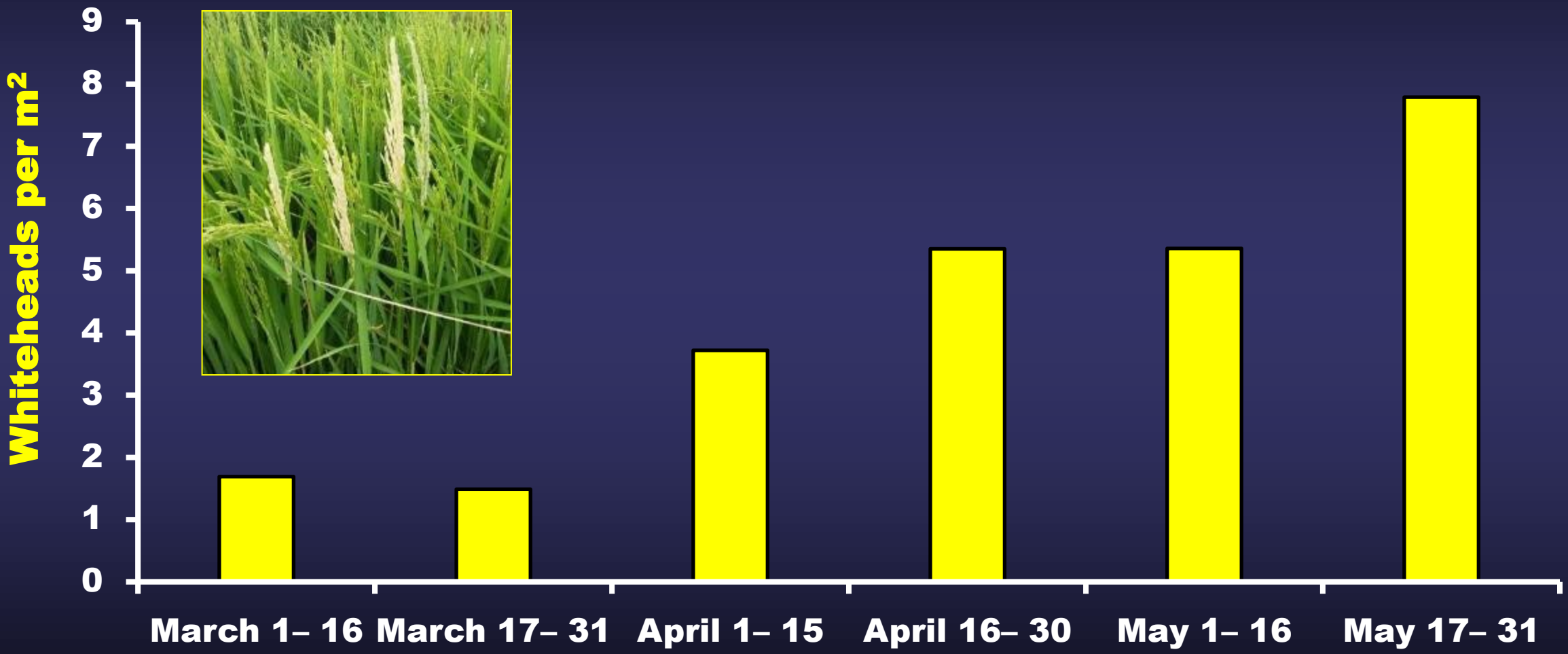
Stemborer injury (whiteheads) increased at later planting dates



Stem Borer Control Failures: 2022-2024

Stem borer control failures – All three species

>80% tillers destroyed

Section 18 for Vantacor obtained in 2025

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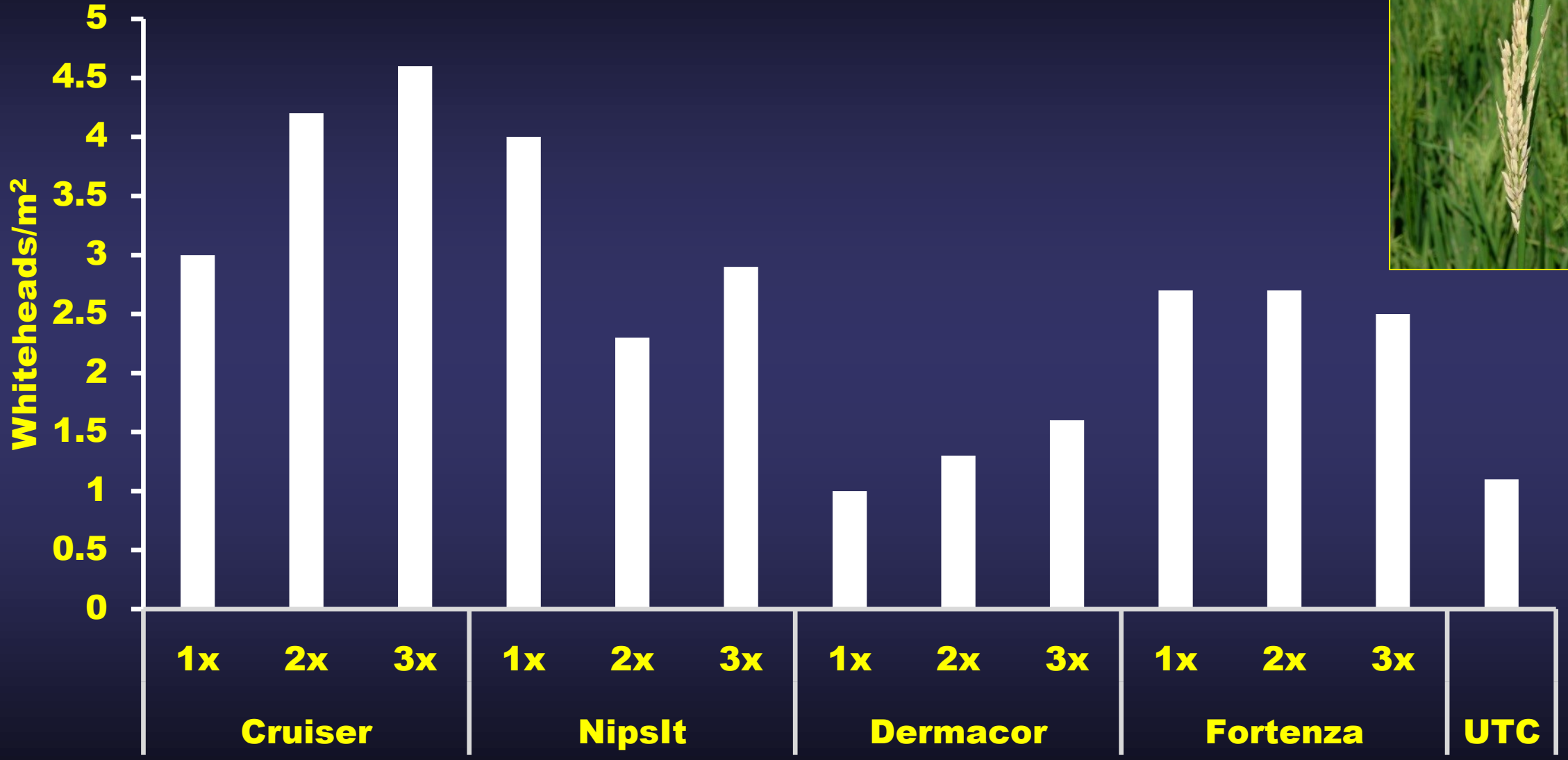
Stem Borer Control Failures, Dermacor-treated

Seed Treatment Rate Trial – 2024
Stem borer control



Stem Borer Resistance Monitoring

Mexican rice borer chlorantraniliprole toxicity 3 d of exposure

LC_{50} 2018*	LC_{50} 2025	Resistance Ratio
0.09 ppm	0.28 ppm	3.21

*Villegas, J.M., B.E. Wilson, and M.O. Way. 2021. Fla. Entomol. 104(4): 274-281. Results of assays from M. Danyal Khan.

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Stem Borer Management

- Begin scouting in late tillering and continue through heading
- Pyrethroids can be applied with fungicides for sheath blight
- Section 18 for Vantacor in 2025

Stem borer injury to leaf sheath

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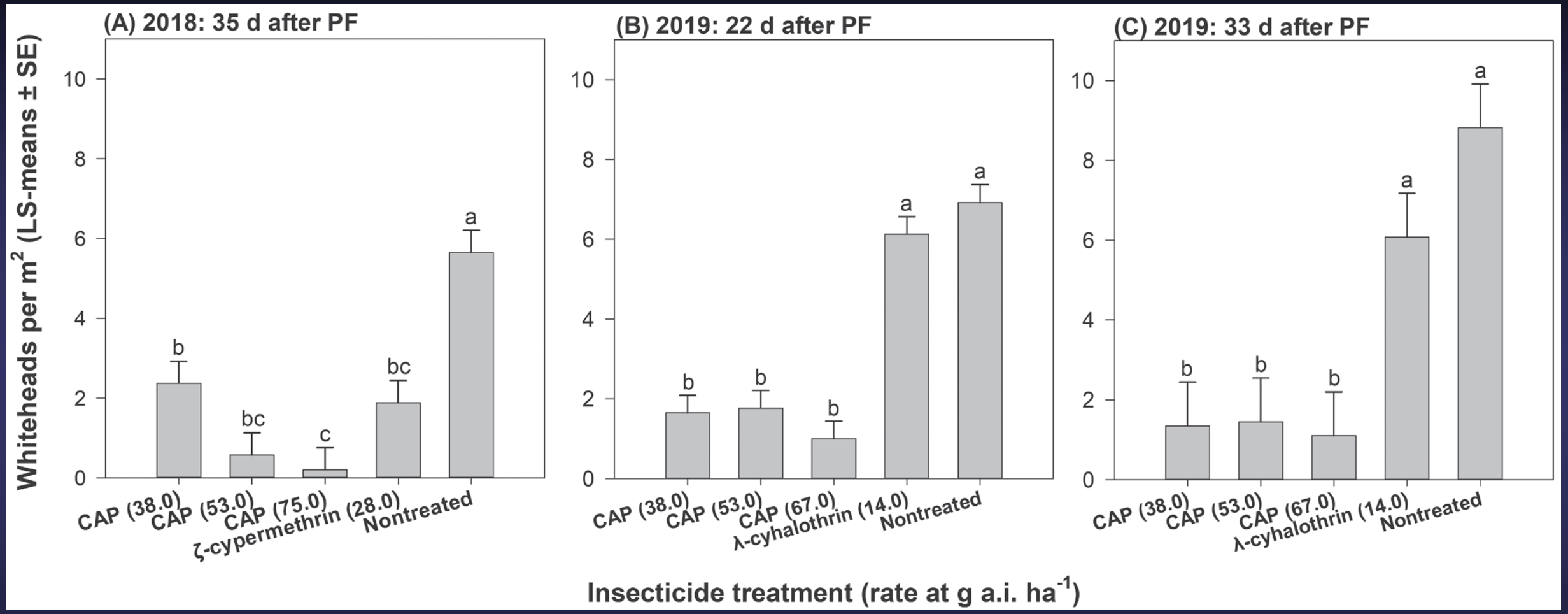
Foliar insecticides



CAP = Prevathon = Vantacor

Villegas et al. 2021.

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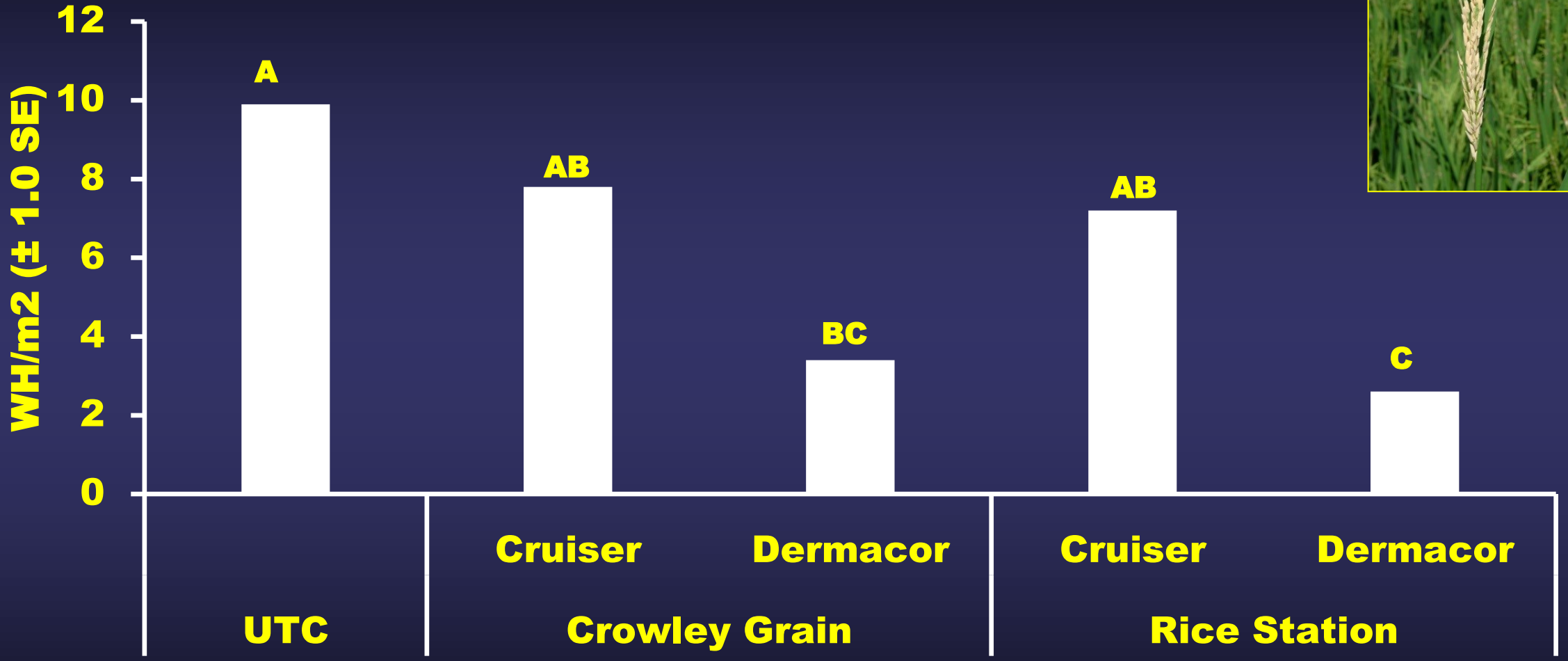
Seed Treatment Trial – 2025
Stem borer control



Treatment: $F = 9.70$, df = 4, 12, $P = 0.001$

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Mid-South Seed Treatment Trial – 2025
Stem Borer Control

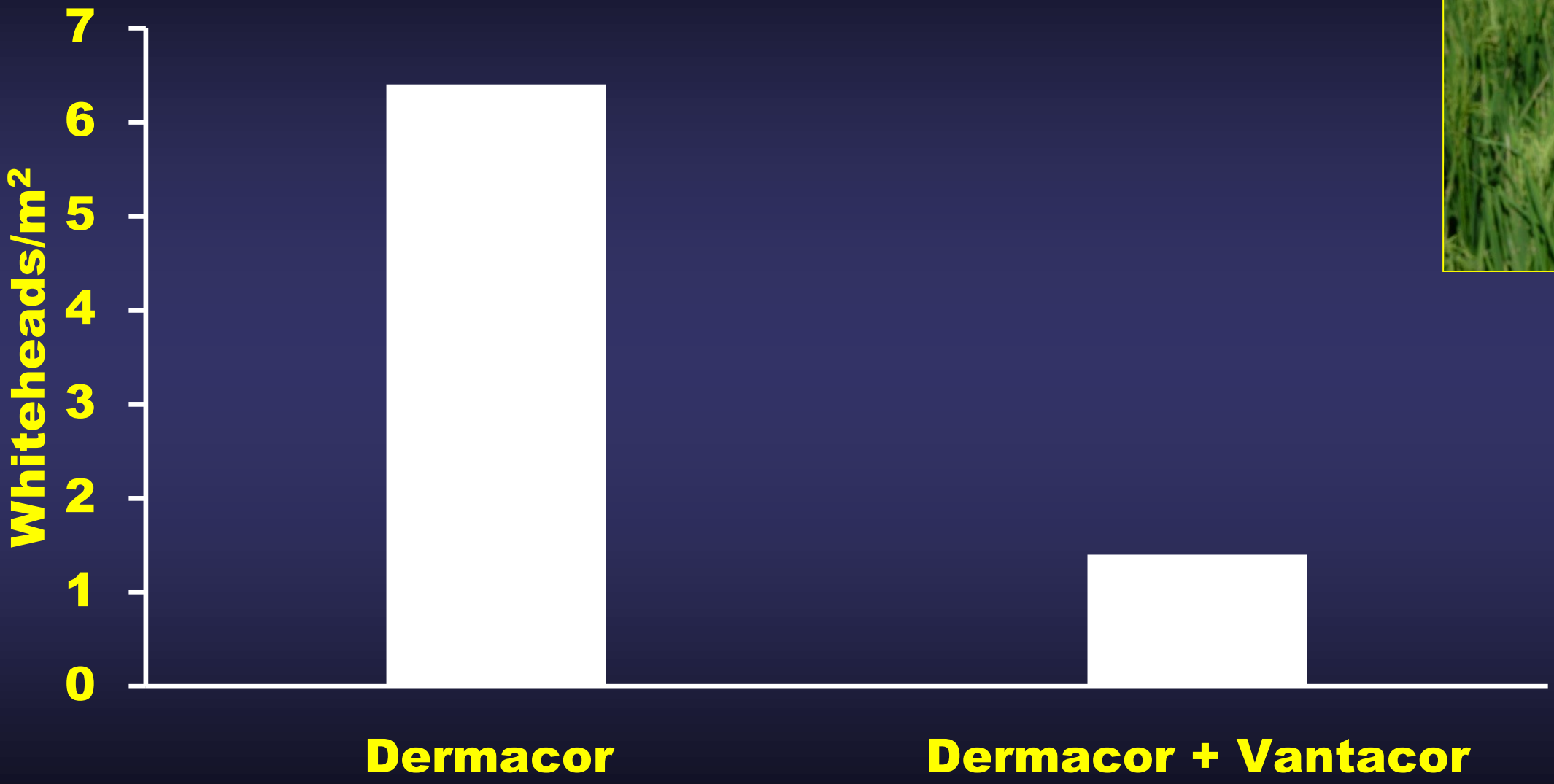
Whiteheads/m² (±1.3 SE)

0 1 2 3 4 5 6 7

	A	A	AB	AB	B	B	B	B	B	B
	Fungicide Only	Cruiser	Fortenza	NipsIt	Dermacor	Fungicide Only	Cruiser	Fortenza	NipsIt	Dermacor
	CLL18					RT7521FP				

Treatment: $F = 2.87$, df = 4, 40, $P = 0.035$
Variety: $F = 28.0$, df = 1, 40, $P = 0.<0.001$
Treatment × Variety: $F = 2.55$, df = 4, 40, $P = 0.054$

Off Station Trial – 2025



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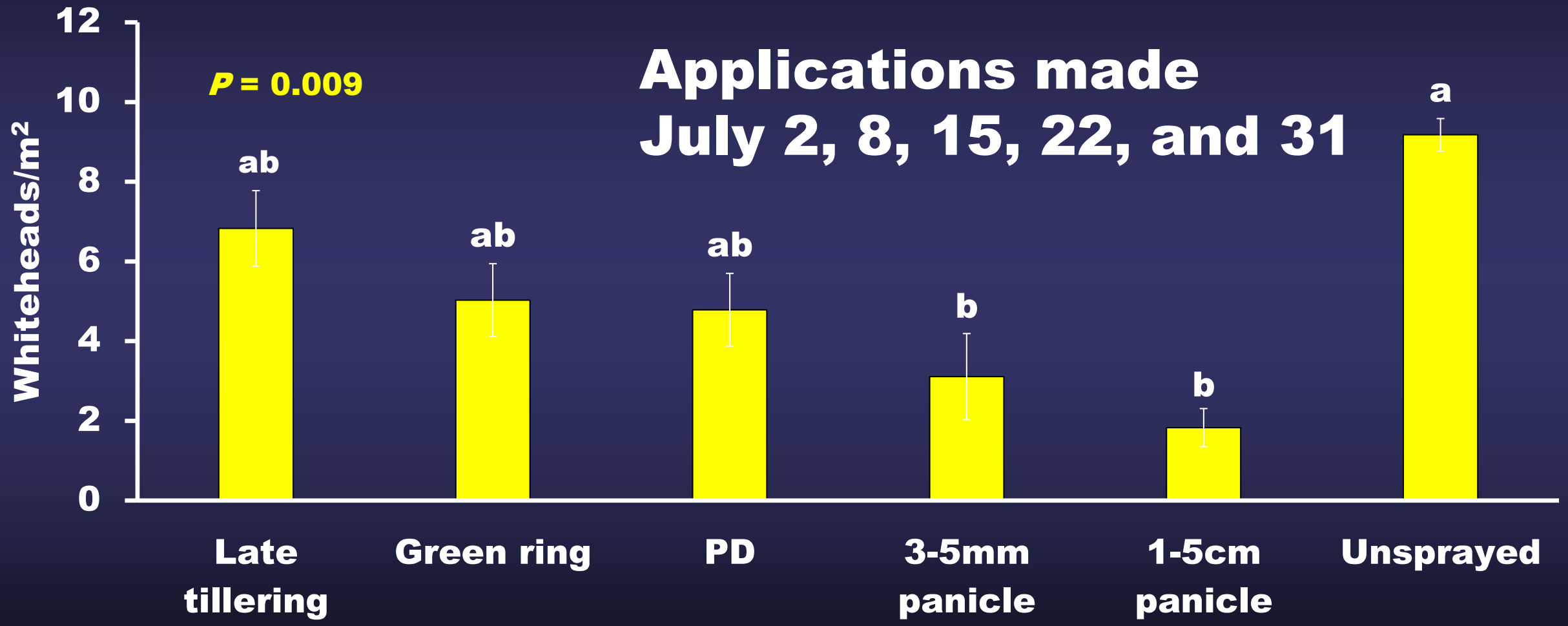
Stem Borer Foliar Timing Trial 2025



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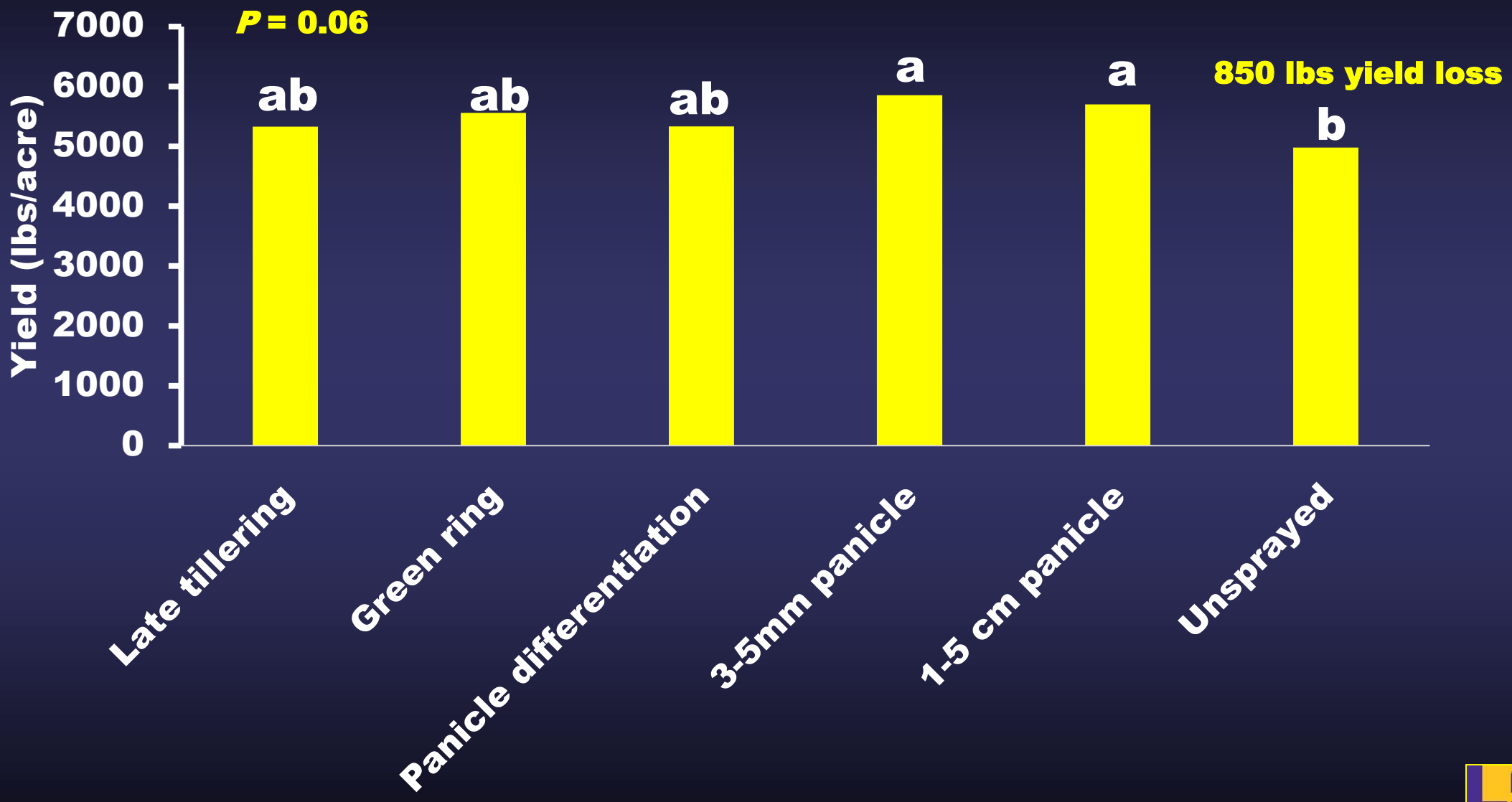
Stem Borer Foliar Timing Trial 2025



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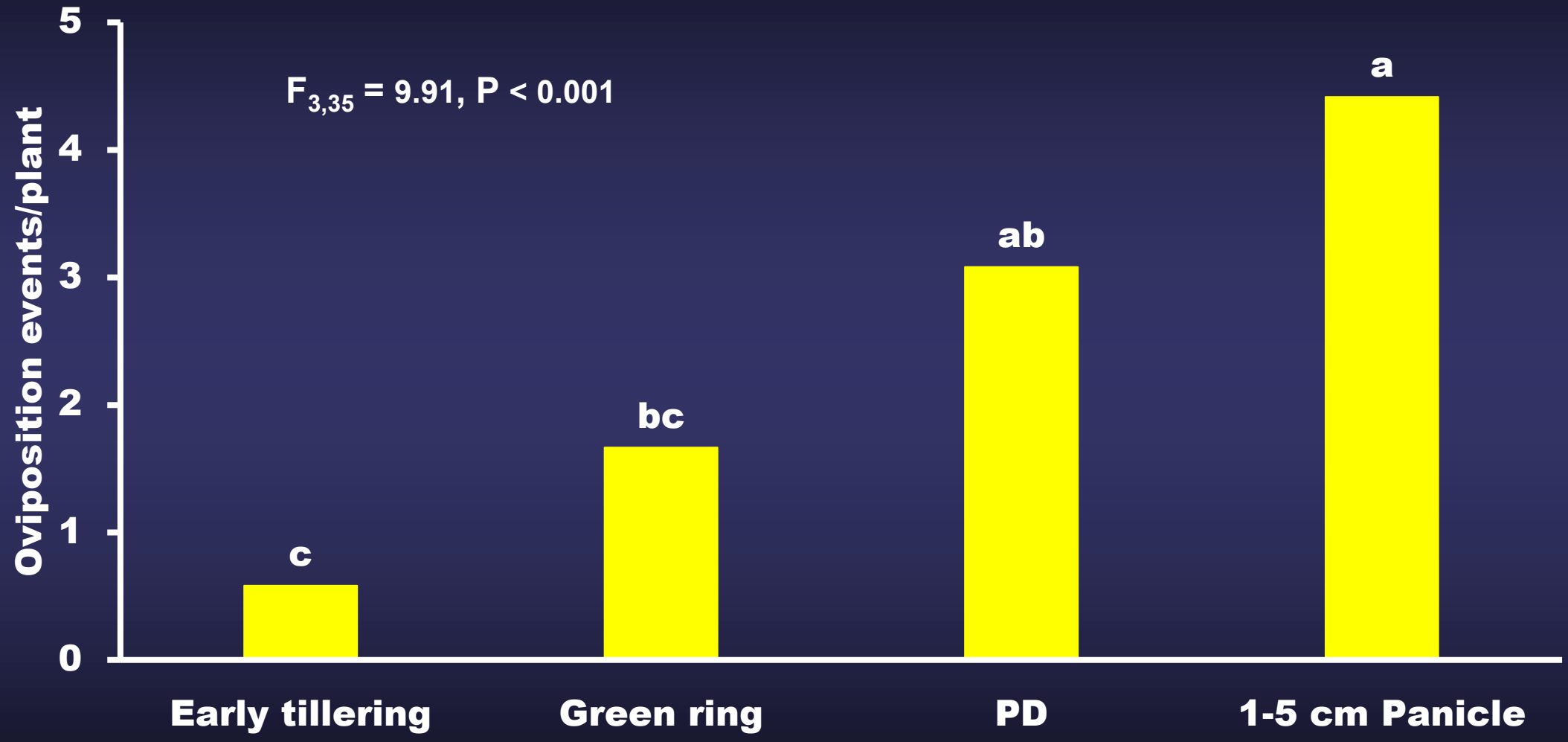
Greenhouse oviposition experiment



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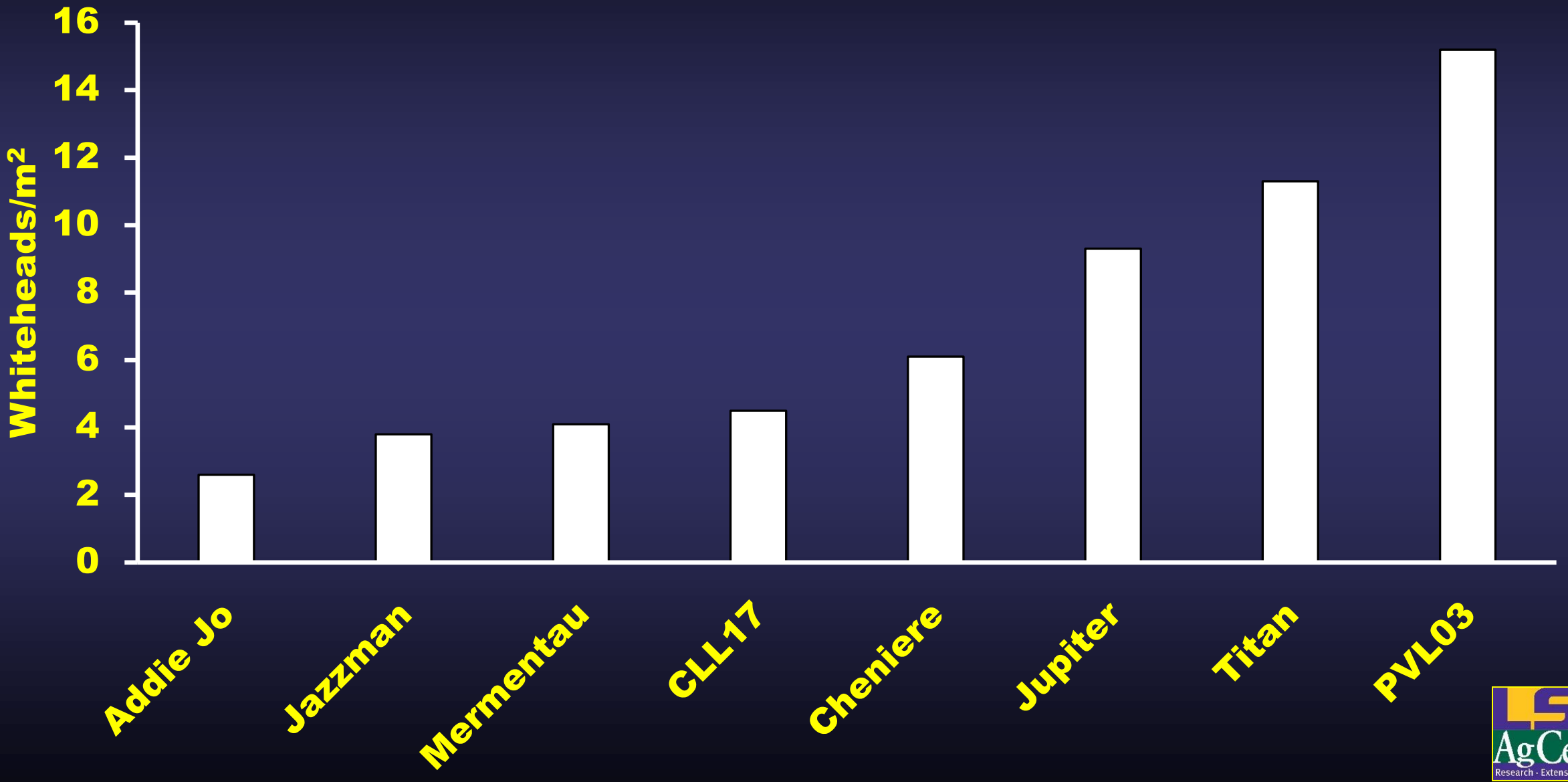
Varietal resistance to borers - 2024



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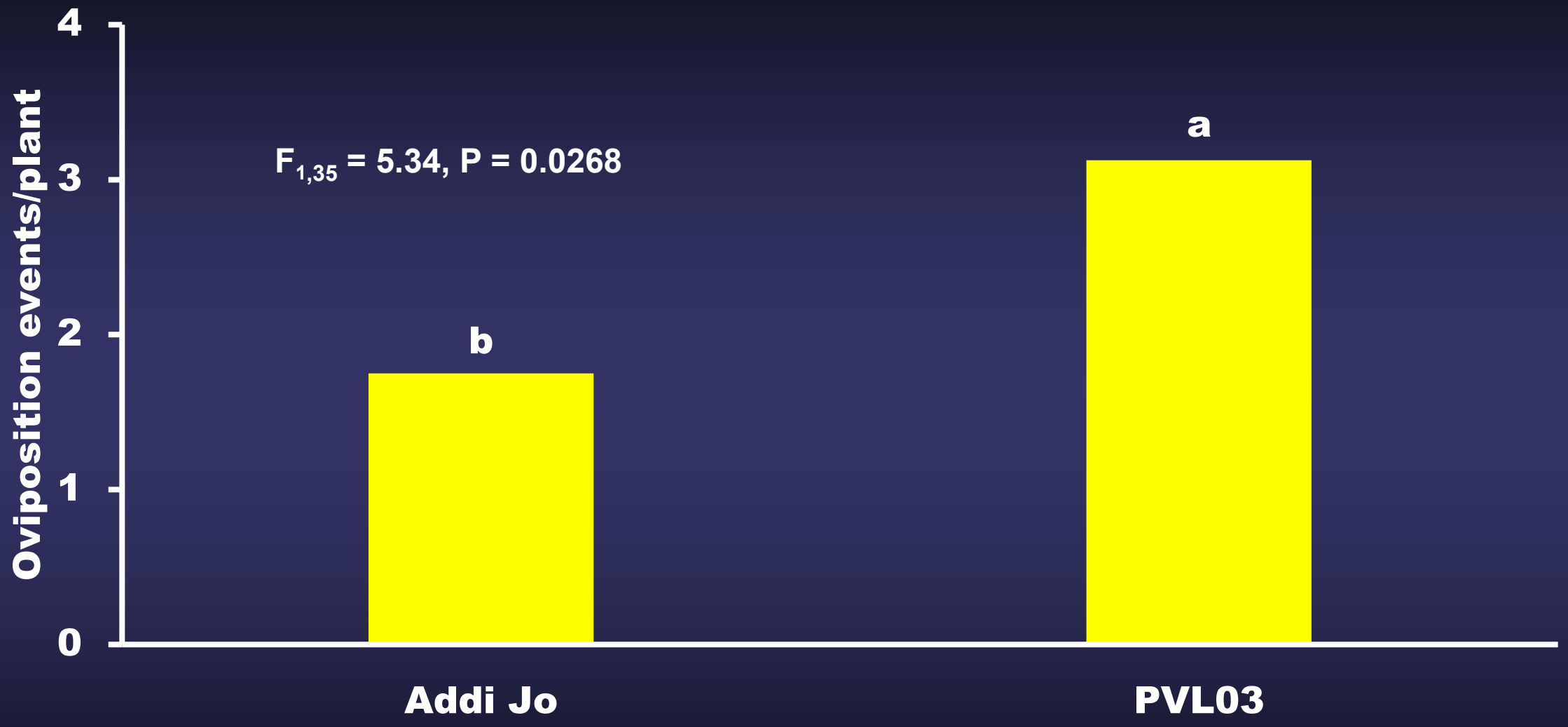
Greenhouse oviposition experiment



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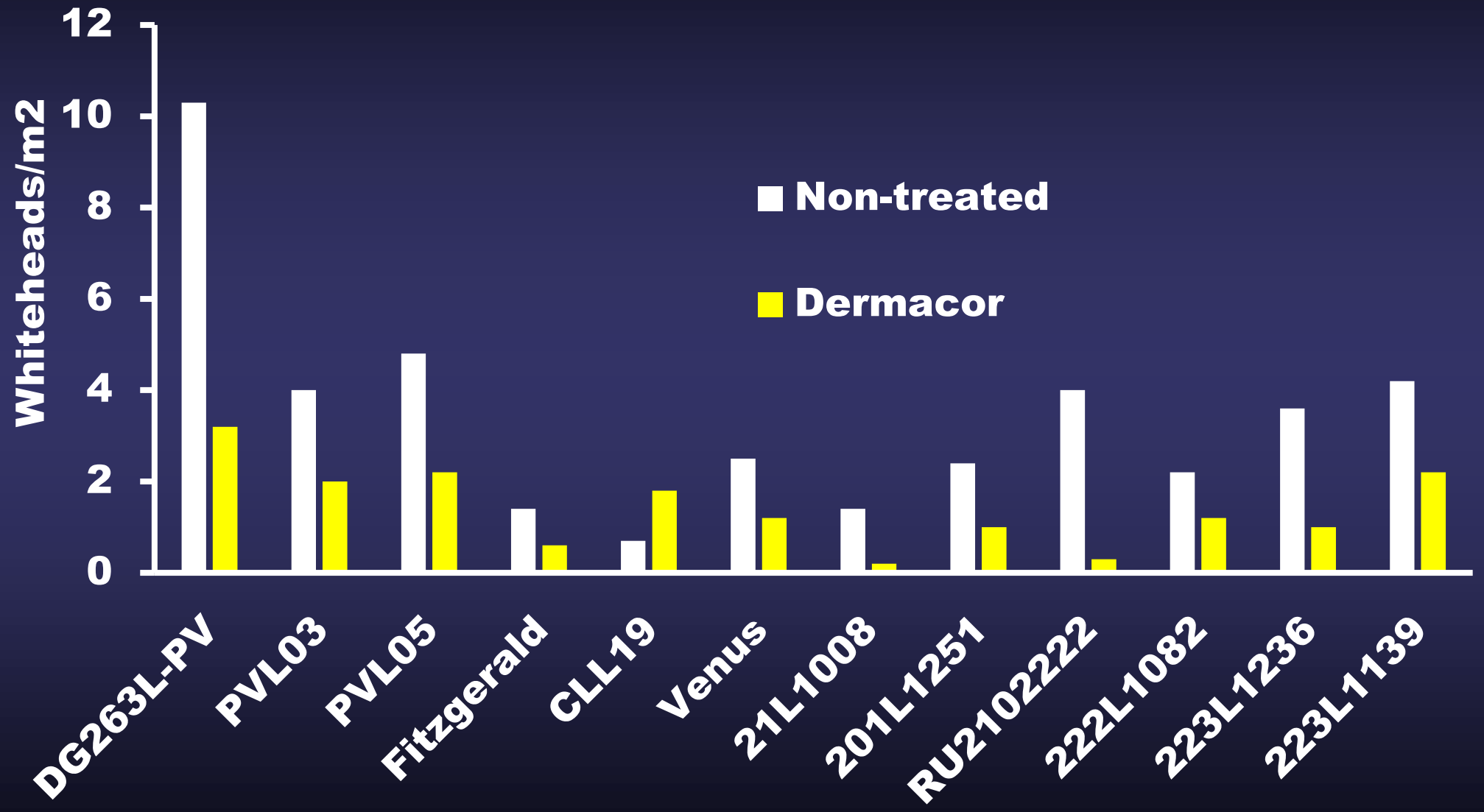
Varietal resistance to borers - 2025



$F_{11,36}$ = 5.34, P = 0.030, SE = 1.1

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Acknowledgements

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Danyal Khan

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Thank you!
Questions?
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