

Cercospora: Management and Epidemiology

Felipe Dalla Lana

Rice Pathologist
LSU AgCenter



Cercospora (*Cercospora janseana*)



Narrow Brown Leaf Spot



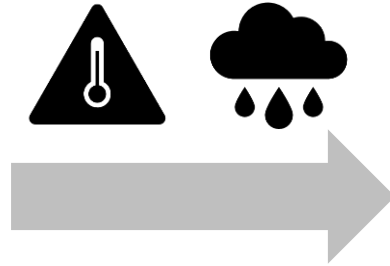
Cercospora Net-Blotch



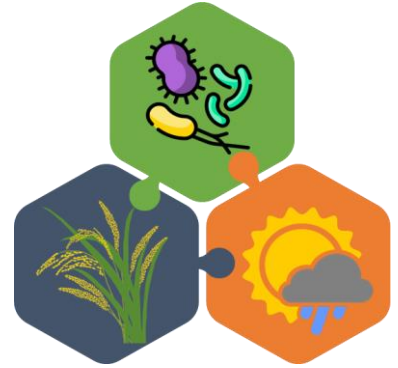
Cercospora Panicle Blight

Disease Cycle

Primary Inoculum



Infection



Colonization

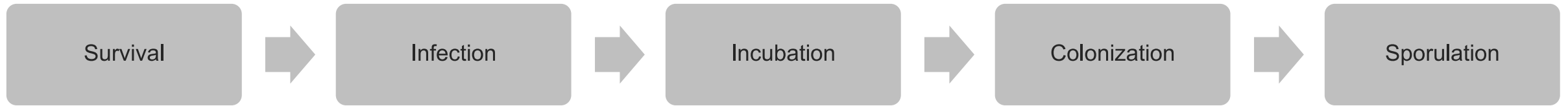


Secondary infections

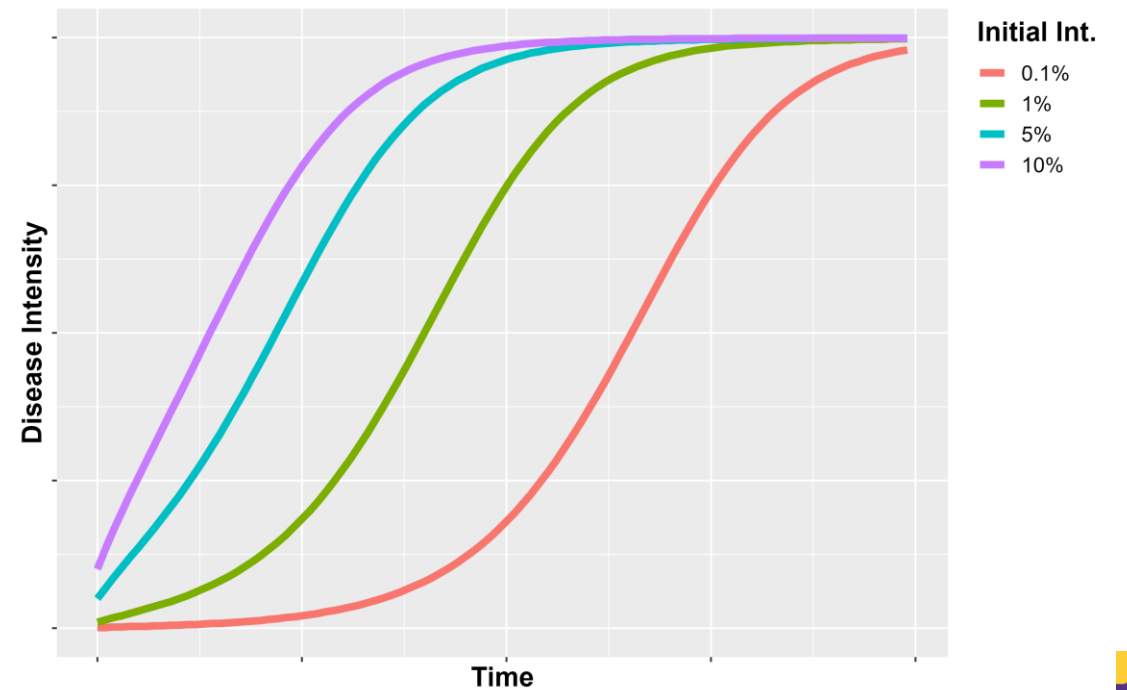
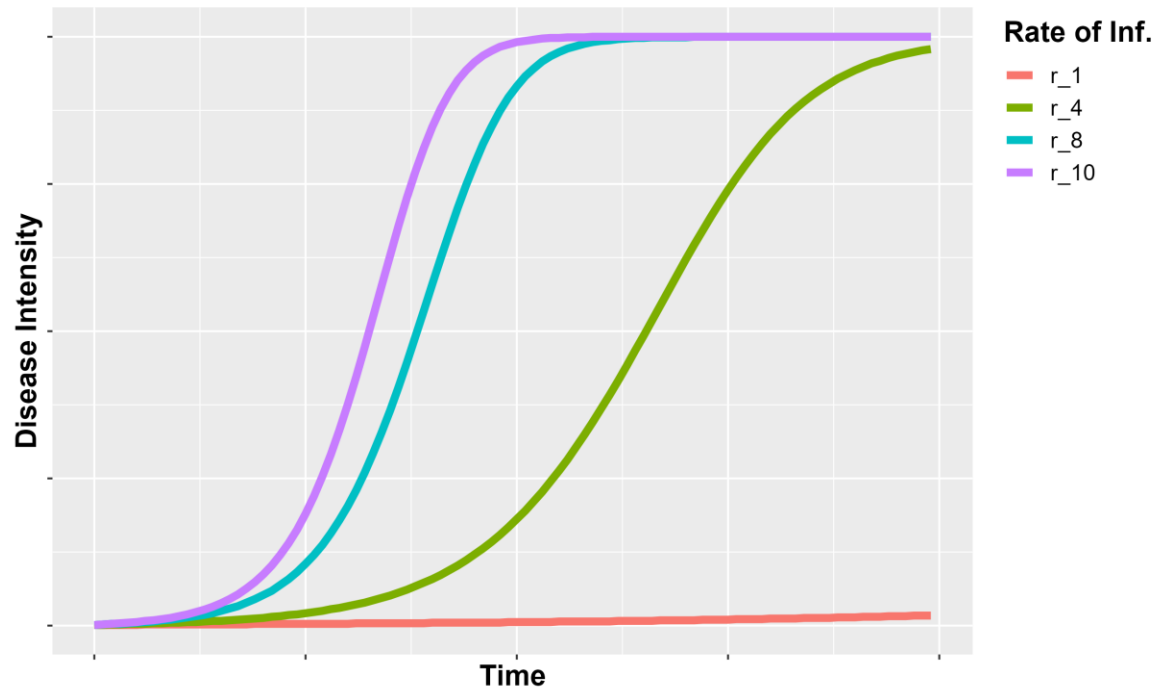
Survival



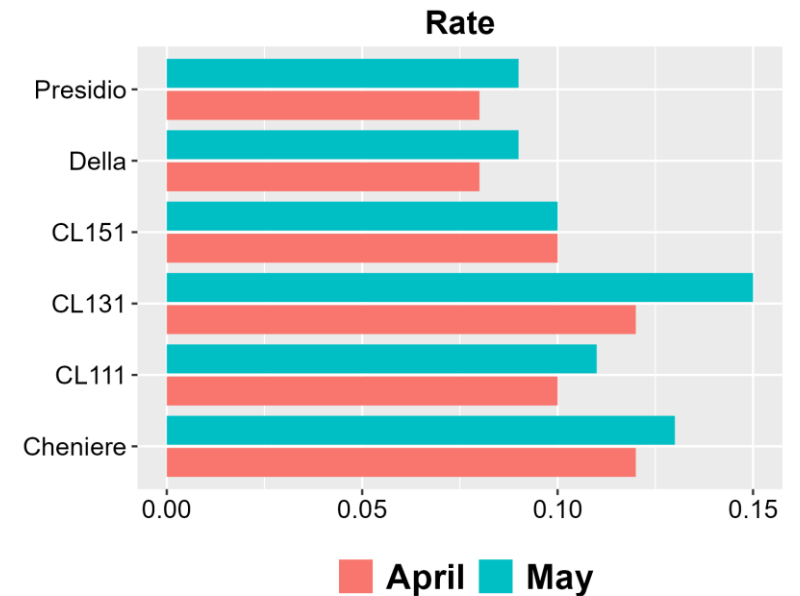
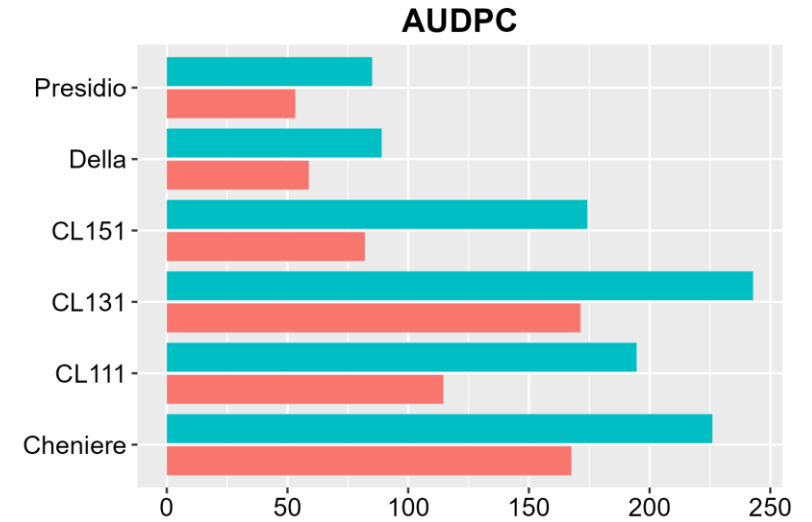
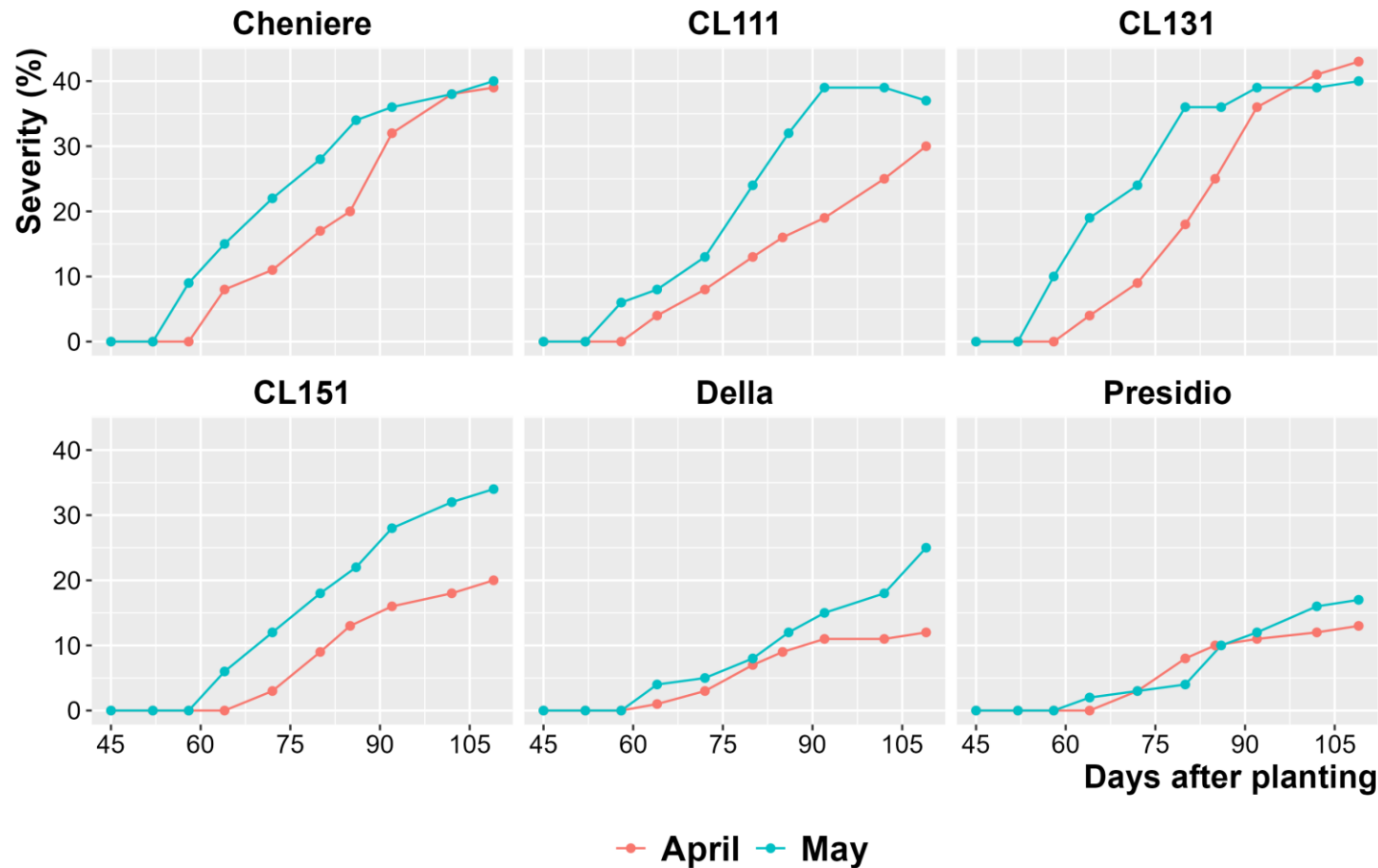
A Multistage Process



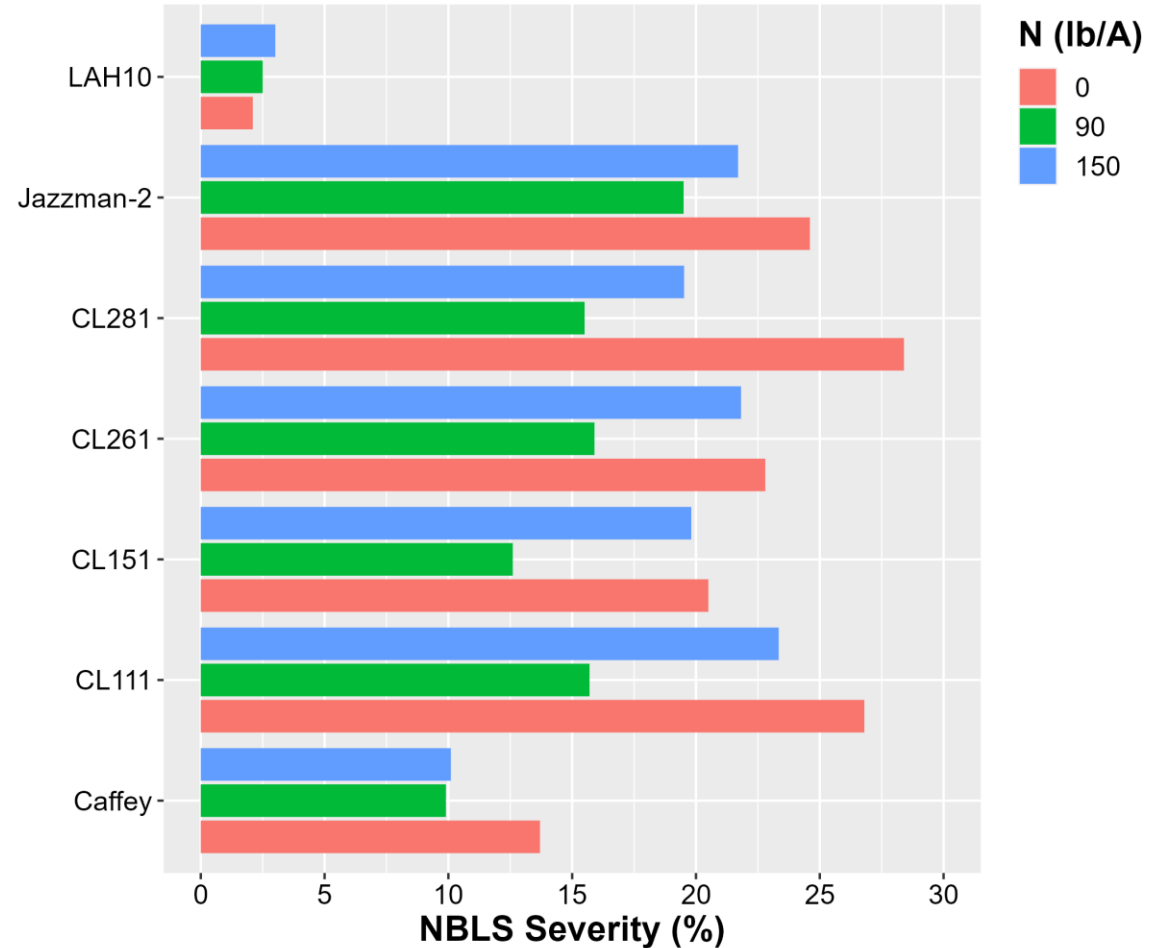
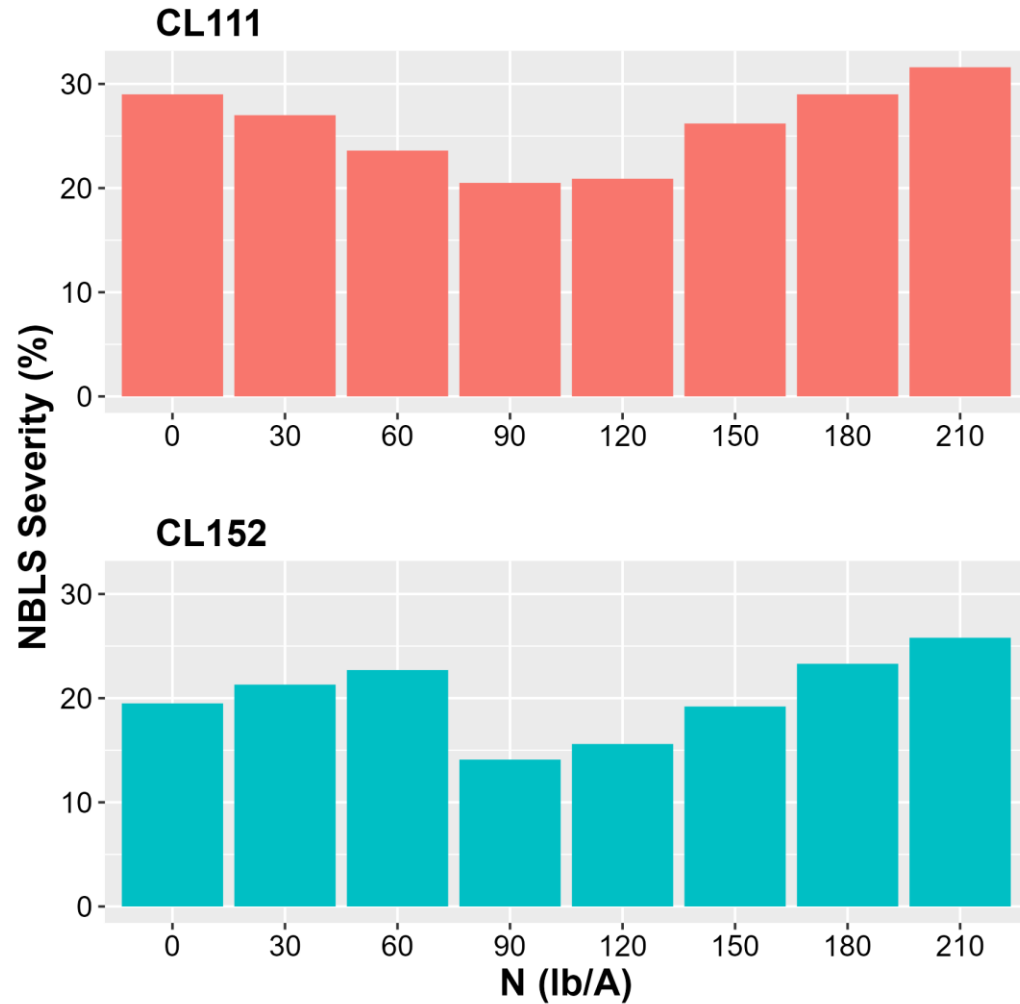
Temporal Development of Polycycle Diseases



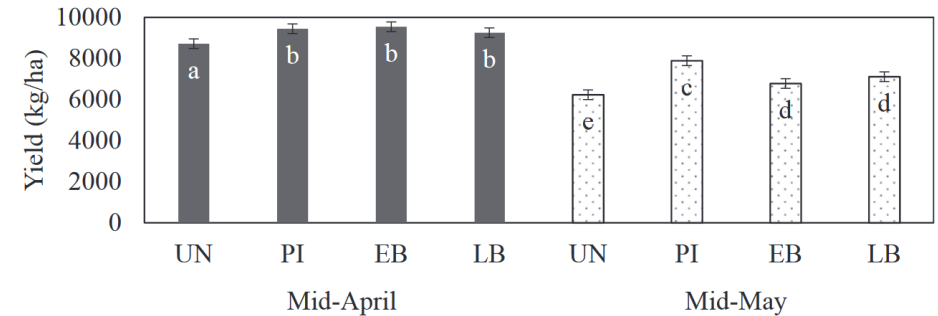
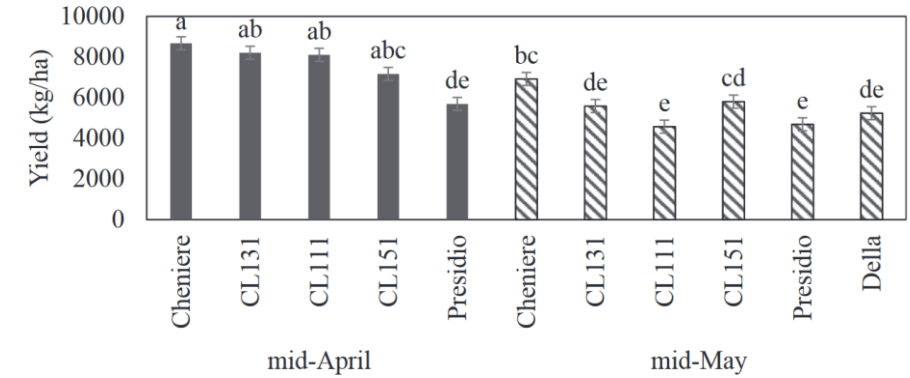
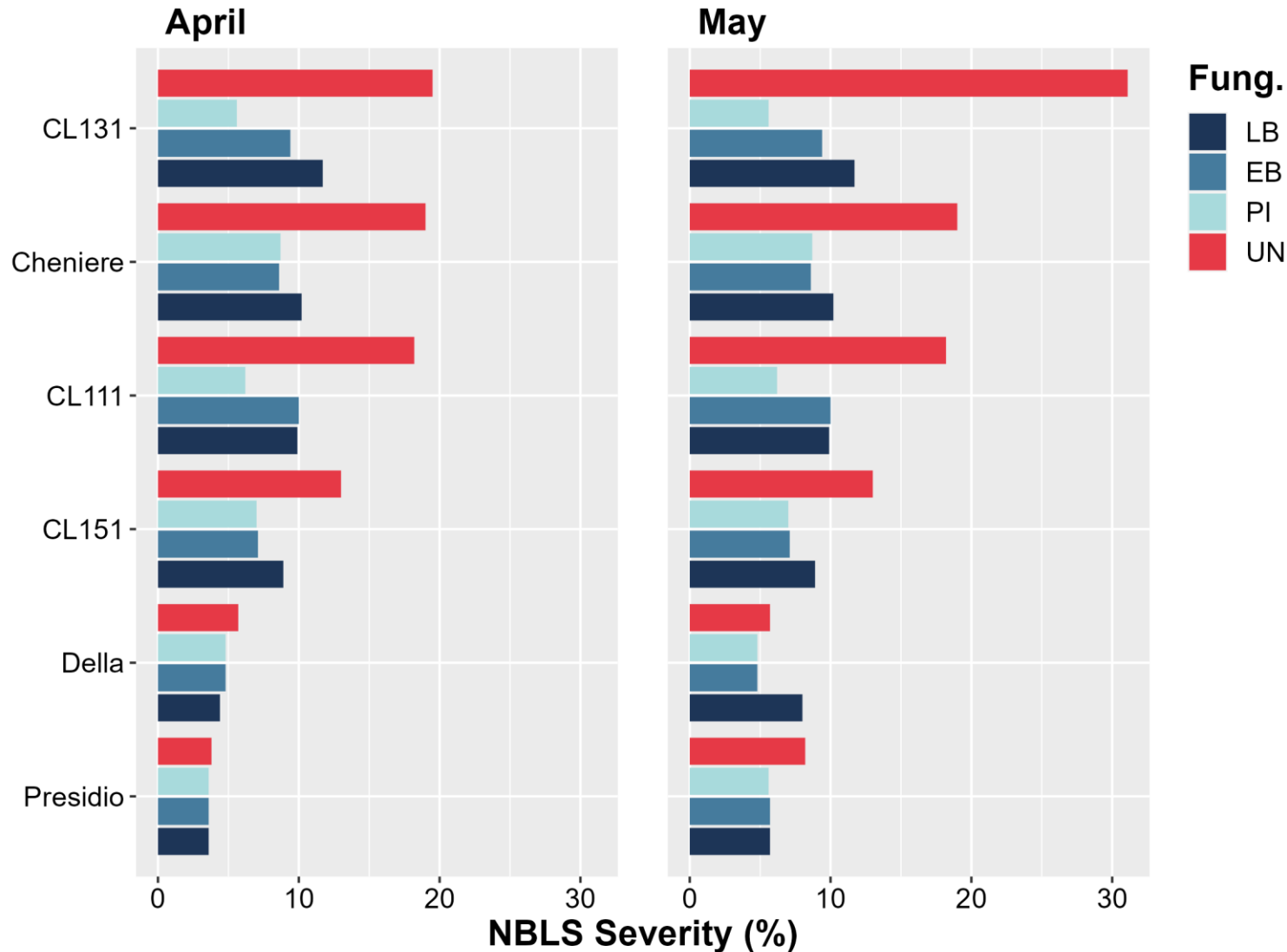
Planting Date



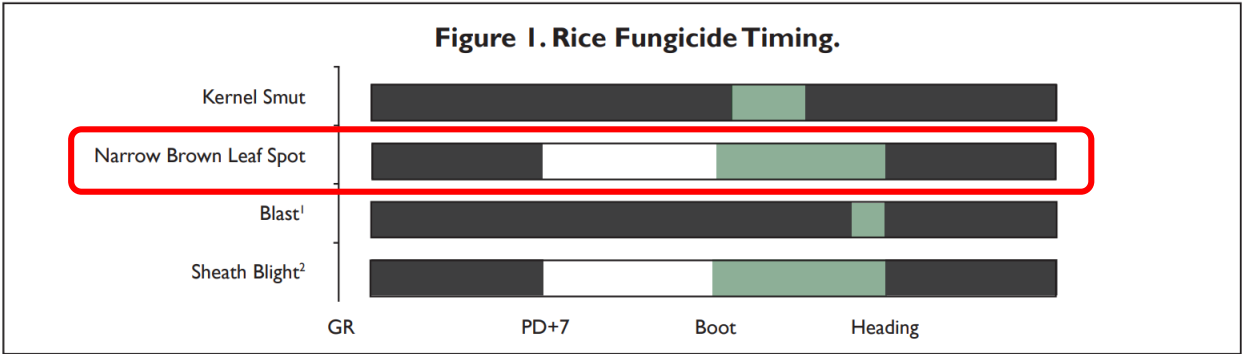
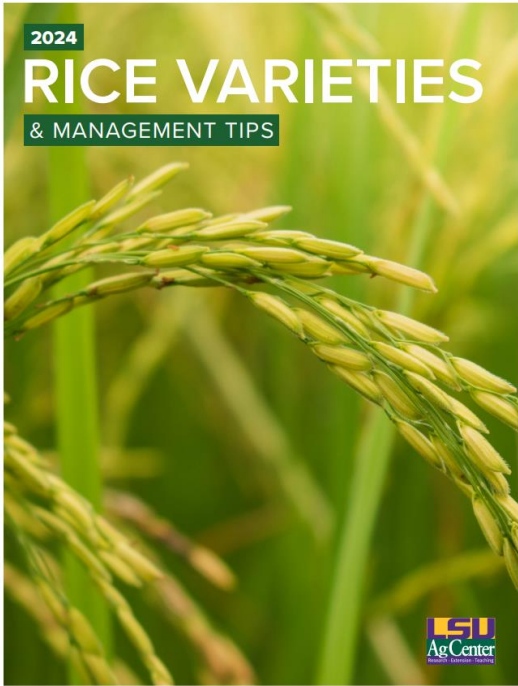
Nitrogen



Chemical Control



Chemical Control



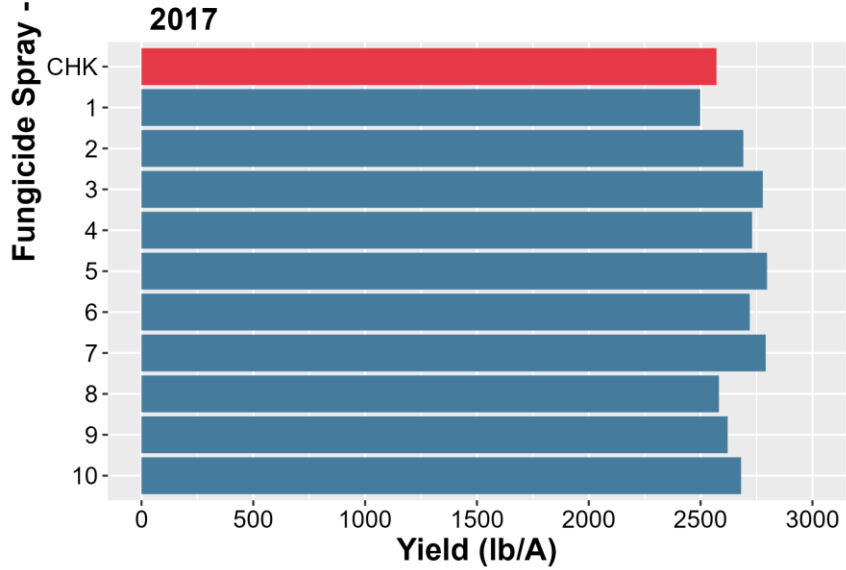
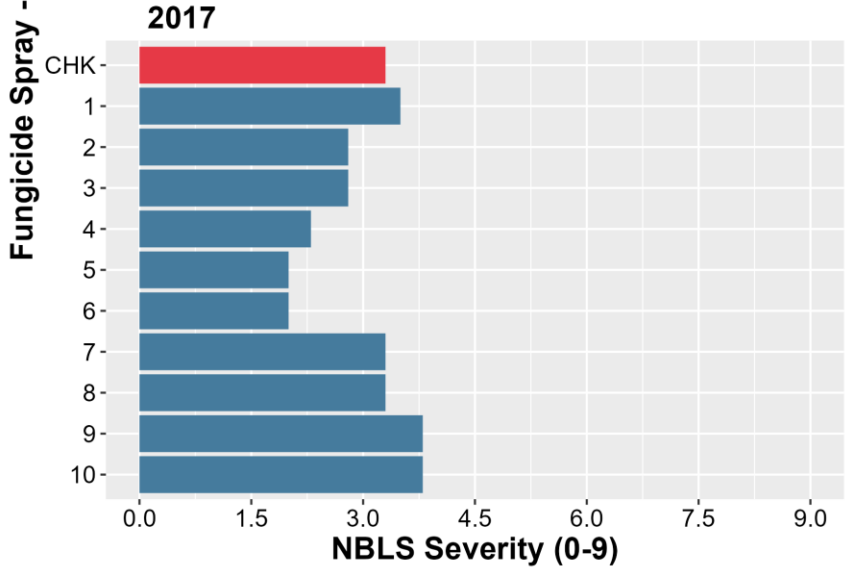
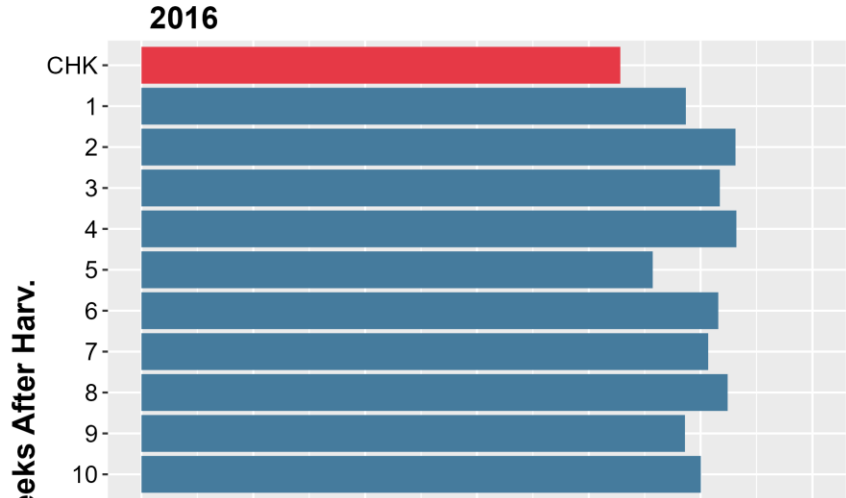
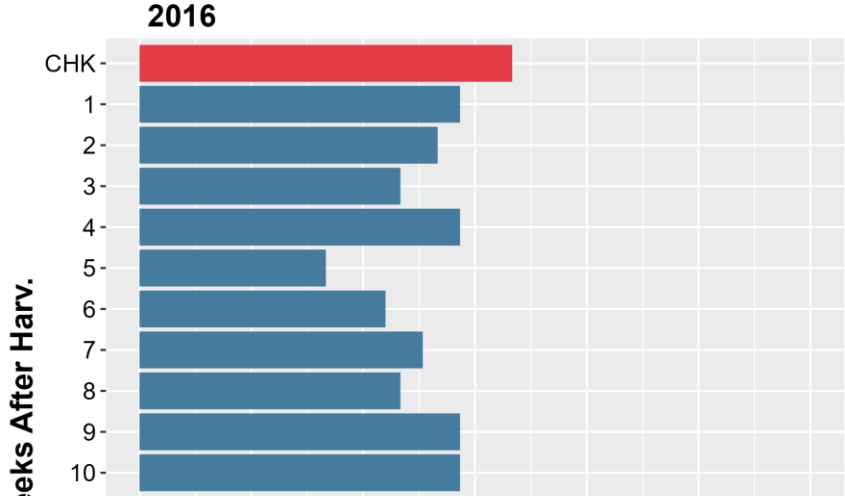
¹ Susceptible varieties under high disease pressure may require an application at the boot stage followed by 50%-70% heading.
² An early application may be necessary if a sheath blight appears before the boot stage.

■ Not recommended □ Application may be needed ■ Best timing

Table 13. Efficacy of Fungicides in Managing Rice Diseases.
 Efficacy categories: P = Poor; F = Fair; G = Good; VG = Very Good; NL = Not Labeled for use against this disease.

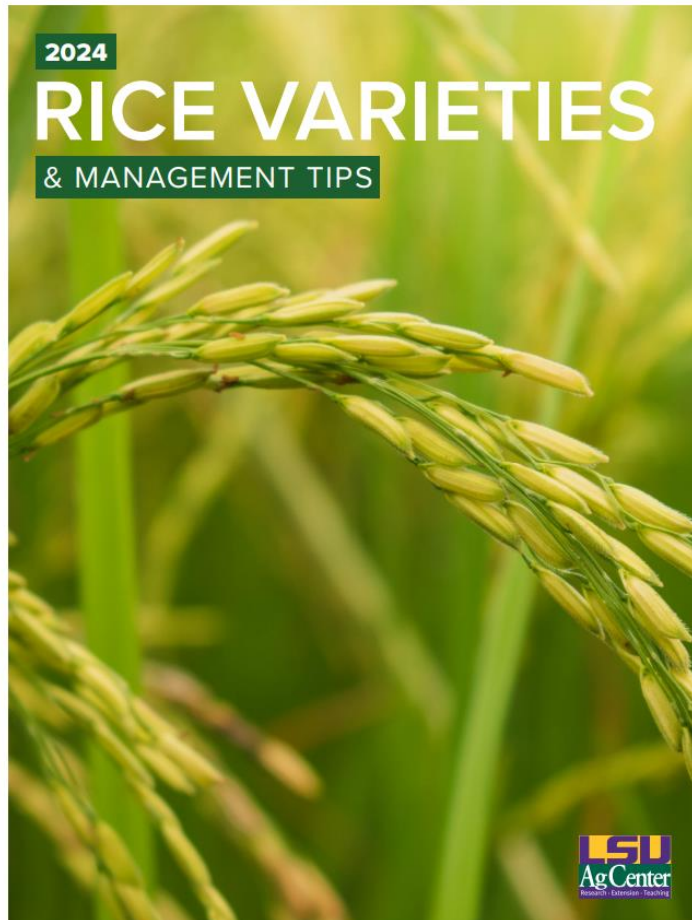
Class and Mode of Action Group ¹	Active Ingredient	Product(s) ²	Rate ³ (fl oz)	Blast	Sheath Blight	Ool Resistant Sheath Blight	Cercospora	Kernel Smut
QoI Strobilurins Group 11	Azoxystrobin	Quadris 2.08 SC Others	9-15.5	G	VG	P	P	P
	Trifloxystrobin	Flint Extra	3.1-4.7	VG	G	P	NL	NL
Carboxamides Group 7	Flutolanil	Elegia 3.8 F	12-32	NL	G	G	NL	NL
	Fluxapyroxad	Sercadis 2.47 SC						
Demethylation Inhibitors (DMI) Group 3	Propiconazole	Tilt 3.6 EC Others	6-10	NL	F	F	G	G
Mixed ⁴	Azoxystrobin, Propiconazole	Quilt Xcel 2.2 SE Others	14-27	G	VG	P	G	G
	Azoxystrobin, Difenconazole	Amistar Top Other	10-15	G	VG	G	G	G

Chemical Control – 2nd Crop








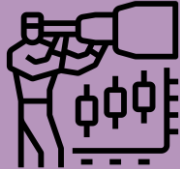
Host Resistance

Dr. Richards



Variety	Blast	Sheath Blight	Narrow Brown Leaf Spot	Bacterial Panicle Blight	Straighthead
Addi Jo	R1	S	MR	MR	MR
Aroma22	S	MS	MR	MS	MS
Avant	S	S	MR	S	MR
Cheniere	MS	S	S	MS	MS
CL111	R ¹	VS	S	VS	MS
CL151	VS	S	S	VS	VS
CL153	R ¹	S	MS	MS	MS
CLJ01	MS	MS	MS	S	MS
CLL16	R ¹	S	MR	S	MR
CLL18	MS	MS	MR	-	MR
CLL19	R ¹	S	MS	S	S
CLM04	MS	MS	MR	MR	S
Della-2	MS	S	MS	MS	R
DG-263L	MR	S	R	MS	MR
Frontiere	-	S	S	-	S
Jazzman	MR	MS	S	S	MS
Jupiter	S	MS	S	MR	S
Mermentau	S	S	S	S	S
PVL03	R ¹	S	MS	MR	MR
PVL04	- ¹	S	MR	-	S
RT7301 ²	MR	MS	MR	MS	R
RT7302 ²	-	MR	MR	-	MR
RT7331MA ²	-	MR	MR	-	MR
RT7421FP ²	-	MR	MR	-	MR
RT7431MA ²	-	MR	MR	-	MR
RT7521 FP ²	MR	MS	MR	MR	R
RT781 ²	-	MR	MR	-	MR
Taurus	S	MS	MS	S	MS
Titan	S	S	MS	MS	S

What to Consider

1	2	3	4	5	6
Field history	Variety resistance and seed	Management	Weather	Disease intensity	Yield expectation and market
					



Acknowledgements

Rice Pathology Program

- Laura Monte (Research Farm Specialist)
- Dylan Trahan (Research Associate)
- Dulakshi Mohottige (MS student)
- Anderson Cerutti (Intern)
- Zeb Kennerson (Student Worker)

Rice Research Station

- Agronomy Program
- Breeding Program
- Entomology Program
- Quantitative Genetics Program
- Farm Crew

Plant Pathology

- Dr. Jong H. Ham (Bacterial Panicle Blight)
- Dr. Ely Oliveira-Garcia (Blast)
- Dr. Jonathan Richards (Cercospora)
- Dr. Paul "Trey" Price (North Louisiana)
- Dr. Camila Nicolli (University of Arkansas)



Thank you

Felipe Dalla Lana

Rice Pathologist – LSU AgCenter

fdallalana@agcenter.lsu.edu

330-461-6634



