"New" Fungicides for Disease Management in LA Crops

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Fungicide Modes of Action

- "Triazoles" = Demethylation Inhibitors = DMIs = Group 3
 - Medium risk to select for resistance



- <u>High</u> risk to select for resistance
- "Qols" = Strobilurins = "Strobies" = Quinone Outside Inhibitors = Group 11
 - <u>High</u> risk to select for resistance
- MBCs = thiophanates = Group 1
 - <u>High</u> risk to select for resistance







Northern corn leaf blight (NCLB)

Southern corn leaf blight **(SCLB)**

Curvularia leaf spot (CLS)

Southern rust (SR)

Gray leaf spot (GLS)

- Typical application timing = VT/R1...disease resistant hybrids do not require fungicides.
- Some V-stage applications by farmers who budget 2 applications
- Vast majority of fungicides going out by air...a handful that spray by ground
- Efficacy data for all crops based on ground applications at 15GPA

Foliar Corn Diseases of Concern in Louisiana





Fungicide mode of action groups: Group 11 Qol Strobilurins Group 3 DMI Triazoles Group 7 SDHI

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Fungicide Efficacy for Control of Corn Diseases Table (04/2022)

for Control of le (04/2022)		Anthracnose leaf blight	Common rust	Eyespot	Gray leaf spot	Northern corn leaf blight	Southern rust	Tar spot'	Harvest restriction ²	Veltyma
Product/Trade name	Rate/A (fl oz)	A S	3	2	8	žě	R	P	н Н П	vertyina
Quadris 2.08 SC, multiple generics	6.0 - 15.5	VG	E	VG	E	G	VG	NL	7 days	
Headline 2.09 EC/SC	6.0 - 12.0	VG	E	E	E	VG	VG	NL	7 days	Revytek
Aproach 2.08 SC	3.0 - 12.0	VG	VG-E	VG	F-VG	VG	G	G ³	7 days	
Xyway LFR 1.92 SC	LFR: 7.6-15.2	NL	U	NL	G	VG	NL	NL	N/A	
Xyway 3D 2.5 SC	3D: 5.8-11.8	NL	U	NL	u	VG	NL	NL	N/A	Delaro32
Tilt 3.6 EC, multiple generics	2.0 - 4.0	NL	VG	E	G	G	F	NL	30 days	
Proline 480 SC	5.7	U	VG	E	U	VG	G	NL	14 days	Delaro Co
Folicur 3.6 F, multiple generics	4.0 - 6.0	NL	U	NL	U	VG	F	NL	36 days	Delaro co
Domark 230 ME	4.0 - 6.0	U	U	U	E	VG	G	G ³	R3 (milk)	
Quilt Xcel 2.2 SE, multiple generics	10.5 - 14.0	VG	VG-E	VG-E	E	VG	VG	NL	30 days	Miravis N
Trivapro 2.21 SE	13.7	U	U	U	E	VG	E	G-VG	30 days	Priaxor 4.
Aproach Prima 2.34 SC	3.4 - 6.8	U	U	U	E	VG	G	G-VG ³	30 days	Headline
Fortix 3.22 SC Preemptor 3.22 SC	4.0 -6.0	U	U	U	E	VG	VG	G-VG ³	R4 (dough)	Stratego \
Lucento	3.0-5.5	U	U	U	VG-E	VG	VG	G ³	R4	Affiance 1
TopGuard EQ	5.0-7.0	U	F	U	VG	G-VG	G-VG	G-VG ³	7 days	

Veltyma	7.0-10.0	U	U	U	VG-E	VG-E	VG	VG	21 days
Revytek	8.0-15.0	U	U	U	VG-E	VG-E	VG	VG	21 days
Delaro325 SC	8.0-12.0	VG	E	VG	E	VG	G-VG	G-VG	14 days
Delaro Complete 3.83 SC	8.0-12.0	U	U	U	E	VG	G-VG	VG	35 days
Miravis Neo 2.5 SE	13.7	U	U	U	E	VG-E	VG	G-VG	30 days
Priaxor 4.17 SC	4.0 - 8.0	U	VG	U	VG	VG-E	VG	G-VG	21 days
Headline AMP 1.68 SC	10.0 - 14.4	U	E	E	E	VG	G	G-VG	20 days
Stratego YLD 4.18 SC	4.0 - 5.0	VG	E	VG	E	VG	G	NL	14 days
Affiance 1.5 SC	10.0-14.0	U	G-VG	U	G-VG	G-VG	G	G ³	7 days



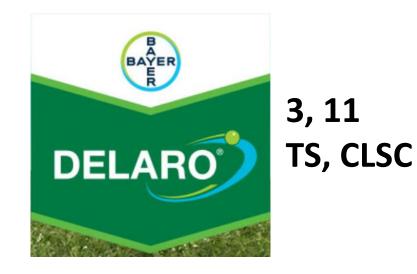
Target spot (Corynespora cassiicola) TS

Common Cotton Foliar Diseases



Cotton leaf spot complex (*Alternaria, Cercospora, Stemphylium, Ascochyta* species) **CLSC**





Fungicide

Priaxor®7, 11Xemium® Brand FungicideTS, CLSC

- All of these products have activity on target spot and cotton leaf spot complex but return on investment is very rare with CLSC and not guaranteed with target spot.
- Will provide more detail Friday 9:45-10:00 am.

"Newer" Cotton Fungicides

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Louisiana Plant Disease Management Guide



Fungicide	Mode of Action Group ²	Use Rate (fl oz/A)	Target Disease(s)/Pathogen(s) ³
Amistar Top (Syngenta)	11+3	8-11.6	Alternaria leaf spot (Alternaria spp.). Anthracnose (Glomerella gossypii). Areolate mildew (Ramularia gossypii), Ascochyta blight (A. gossypii), boll rots (Ascochyta gossypii), Alternaria spp., Diplodia spp., Phoma spp.), cotton rust (Puccinia schedonnardi). Diplodia boll rot (Diplodia spp.), hard lock (Fusarium verticillioides), leafspots and blights (Alternaria spp., Ascochyta gossypii, Cercospora spp., Stemphylium spp.), Southwestern cotton rust (Puccina cacabata, Puccinia spp.) Stemphylium leaf spot (Stemphylium spp.), target spot (Corynespora cassiicola)
Aproach	11	6-12	Stemphylium leaf spot (Stemphylium spp.)
Delaro (Bayer)	11+3	8-12	Target spot (Corynespora cassiicola), rust (Puccinia spp.)
Elatus (Syngenta)	11+7	5-7.3	Ascochyta blight (A. gossypii), Target spot (Corynespora cassiicola)
Headline (BASF)		6-12	Alternaria leaf spot/boll rot (Alternaria spp.), Anthracnose/boll rot (Glomerella spp.), Ascochyta blight/boll rot (Ascochyta spp.), Cercospora blight and leaf spot (Cercospora spp.), Diplodia boll rot (Diplodia spp.), Hard lock/boll rot (Fusarium spp.), Phoma blight, boll rot (Phoma spp.), Stemphylium leaf spot (Stemphylium spp.)
Miravis Top (Syngenta)	7+3	13.7	Alternaria leaf spot (Alternaria spp.), Areolate mildew (Ramularia gossypii), Ascochyta blight (A. gossypii), boll rots (Ascochyta gossypii, Alternaria spp., Diplodia spp., Phoma spp.), hard lock (Fusarium verticillioides), leafspots and blights (Alternaria spp., Ascochyta gossypii, Cercospora spp., Stemphylium spp.), target spot (Corynespora cassiicola)
Priaxor (BASF)	7+11	4-8	Same as above plus Target spot/Corynespora leaf spot (Corynespora cassiicola)
Proline (Bayer)	3	5-5.7	Target spot (Corynespora cassiicola)
Quadris (Syngenta) ⁴	П	6-9	Same as Amistar Top.
Revytek (BASF)	3+7+11	8-15	Same as Priaxor plus Rust (Phokopsoro and Puccinio spp.)
Topguard (FMC)	3	7-14	Alternaria leaf spot/boll rot (Alternaria spp.), anthracnose/boll rot (Glomerella spp.), Areolate mildew (Ramularia gossypii), Ascochyta blight/boll rot (Ascochyta gossypii), Cercospora blight and leaf spot (Cercospora spp.), Diplodia boll rot (Diplopia spp.), Fusarium boll rot (Fusarium spp.), hard lock (Fusarium verticillioides), Phoma blight/boll rot (Phoma spp.), Stemphylium leaf spot (Stemphylium spp.), target spot (Corynespora cassiicola)
Topguard EQ (FMC)	11+3	5-7	Same as Topguard.
Twinline (BASF)	3+11	7-8.5 (10- 12 for Target spot)	Same as Priaxor.
Vertisan (Corteva)	7	16-24	Boll rot (Diplodia spp., Fusarium spp.), Foliar disease complex, Alternaria leaf and stem spots (Alternaria spp.), Cercospora leaf spot (Cercospora spp.), Stemphylium leaf spot (Stemphylium spp.), Hard lock (Fusarium spp.), Soil-borne diseases, Seedling and root rot (Rhizoctonia solari)

Table 1. Foliar fungicides labeled for use in Louisiana cotton.

Anthracnose (ANT)

Corn leaf blight (CLB)

<image>



Zonate leaf spot (ZLS)

Sorghum Diseases of Concern



3, 7, 11* Anthracnose, others, not labeled for target leaf spot



Nexicor[™]

Xemium® Brand Fungicide

3, 7, 11 Anthracnose, Target leaf spot



Priaxor[®]

Xemium® Brand Fungicide

7, 11

Anthracnose, Target leaf spot

"Newer" Grain Sorghum Fungicides

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• Plant Disease Management Guide

Table I. Recommen	nded fungicides, rates a	nd application timing fo	or Anthracnose disease of g	grain sorghum.

Target	Product Choices ¹ and Product Mode of Action Group ²	_	Rate ³	Time of Application	PHI ⁴
Anthracnose	Adastrio	3,7,11	7-9 fl oz	See label	30
(Colletotrichum	Aframe		6-15.5 fl oz	Prior to disease development	14
graminicola)	Aproach	11	12 fl oz	Prior to flowering	6
-	Evito 480 SC	11	2-4 fl oz	Prior to disease development	21
	Headline		6-12 fl oz	Apply no later than 25% flowering	5
	Headline SC		6-12 fl oz	Apply no later than 25% flowering	5
	Nexicor	3,7,11	7-13 fl oz	Prior to disease development	21
	Priaxor	7.11	4-8 fl oz	Prior to disease development	21
	Quadris		6-15.5 fl oz	Prior to disease development	14
	Quilt	11,3	I4 fl oz	Prior to disease development	21
	Quilt Xcel	11,3	10.5-14 fl oz	At first appearance of disease	21
	Topguard	3	7-14 fl oz	Prior to disease development	7
	Topguard EQ	3,11	5-7 fl oz	Prior to disease development	30

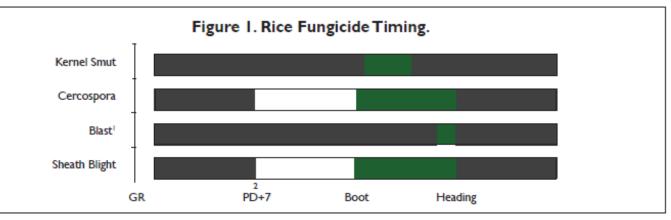
Primary Rice Diseases



Kernel smut False smut Sheath blight Narrow brown leaf spot



enter



Class and Mode of Action Group ¹	Active Ingredient	Product(s) ²	Rate ³ (fl oz)	Blast	Sheath Blight	Qol Resistant Sheath Blight	Cercospora	Kernel Smut
Qol Strobilurins Group 11	Azoxystrobin	Quadris 2.08 SC Others	9-15.5	G	VG	Р	Р	Р
	Trifloxystrobin	Flint Extra	3.1-4.7	VG	G	Р	NL	NL
Carboxamides Group 7	Flutolanil	Elegia 3.8 F	12-32	NL	G	G	NL	NL
	Fluxapyroxad	Sercadis 2.47 SC	4.5-6.8	NL	G	G	NL	NL
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	Р	G	G
	Azoxystrobin, Difenoconazole	Amistar Top Other	10-15	G	VG	G	G	G

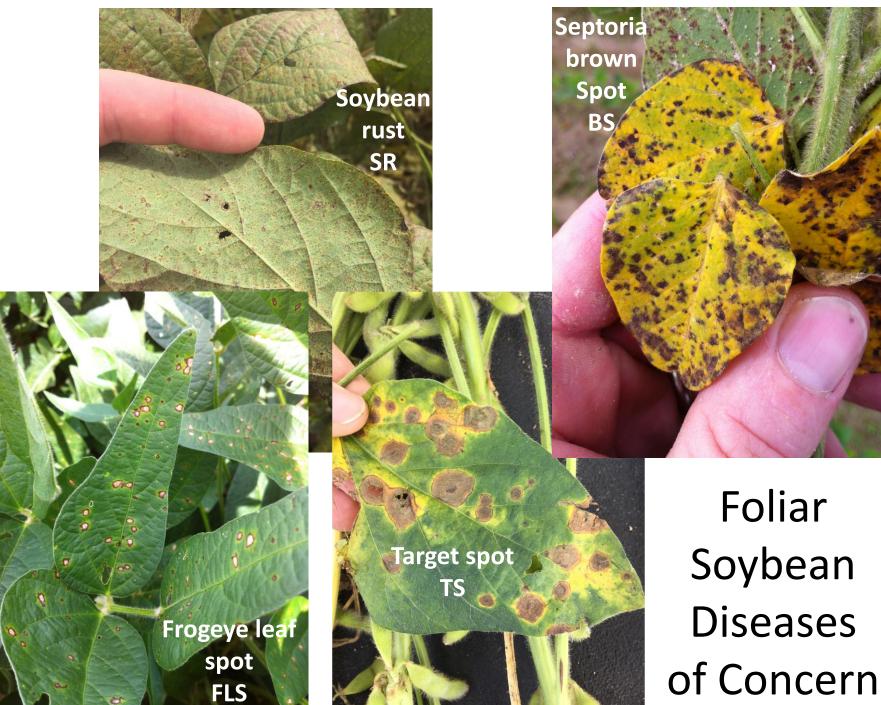


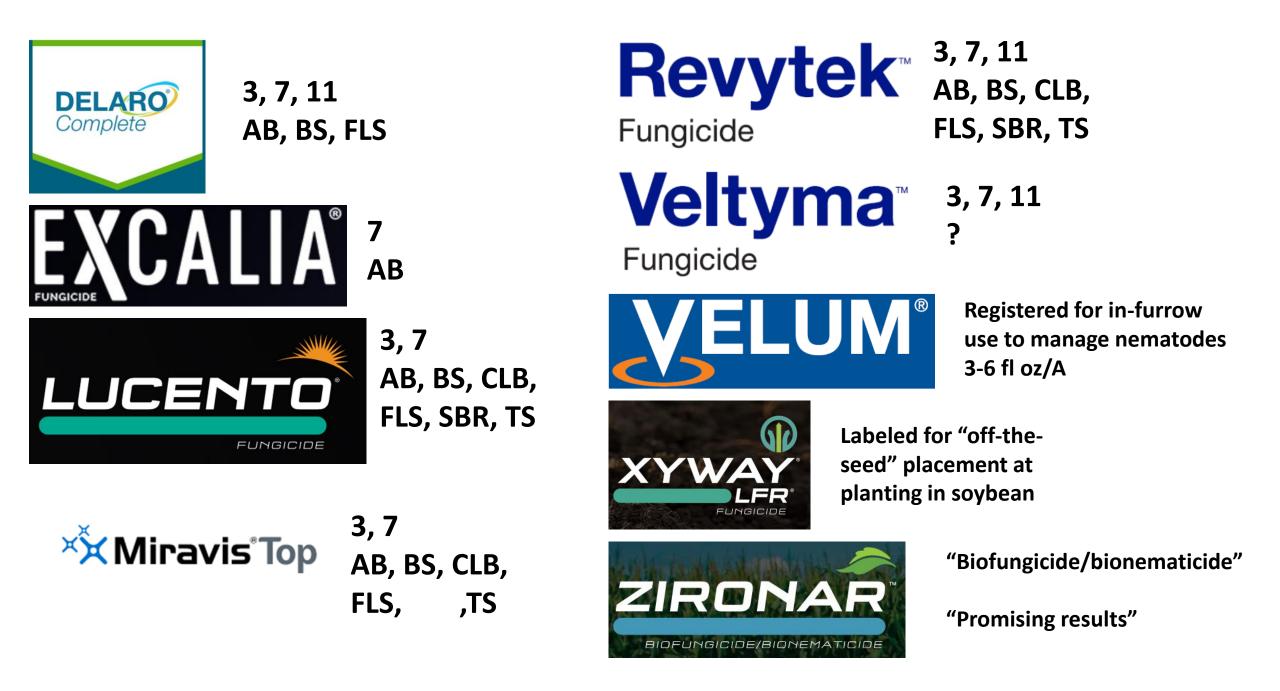
Rice Seed Treatment Excellent Rhizoc material Same AI as Excalia in soybean



Excellent on aerial blight in soybean Labeled for soybean rust as well Effective on "white mold" peanut







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Fu	Fungicide Efficacy for Control of			•	ose	ot 2	e 2		(Pod ight)	ta	¥	ĩ	je
So	ybean Foliar [Diseases Tabl e	e (02/2022)	Aerial web blight	Anthracnose	Brown spot ²	Cercospora leaf blight ³	Frogeye leaf spot ⁴	Diaporthe (Pod and stem blight)	Soybean rust	Target spot	White mold ⁵	Harvest restriction ⁶
	Active ingredient (%)	Product/Trade name	Rate/A (fl oz)	Aeri blig	Ant	Bro	er G	Fro.		3	, E	M	Har rest
	Azoxystrobin 22.9%	Quadris 2.08 SC, multiple generics	6.0 - 15.5	VG	VG	P-G	P	Р	U	G-VG	P-F	Р	14 days
11	Fluoxastrobin 40.3%	Aftershock 480 SC, Evito 480 SC	2.0 - 5.7	VG	G	P-G	P	Р	U	U	U	NL	30 days, R5
	Picoxystrobin 22.5%	Aproach 2.08 SC	6.0 - 12.0	VG	G	P-G	Р	P	U	G	U	G ⁸	14 days
	Pyraclostrobin 23.6%	Headline 2.09 EC/SC	6.0 - 12.0	VG	VG	P-G	Р	P	U	VG	P-F	NL	21 days
	Cyproconazole 8.9%	Alto 100SL	2.75 - 5.5	U	U	VG	F	F	U	VG	U	NL	30 days
	Flutriafol 11.8%	Topguard 1.04 SC	7.0 - 14.0	U	VG	VG	P-G	G-VG	U	VG-E	Р	F	21 days
3	Propiconazole 41.8%	Tilt 3.6 EC, multiple generics	4.0 - 6.0	Р	VG	G	NL	F	NL	VG	U	NL	R5
	Prothioconazole 41.0%	Proline 480 SC	2.5 - 5.0	NL	NL	NL	NL	G-VG	NL	VG	U	F	21 days
	Tetraconazole 20.5%	Domark 230 ME	4.0 - 5.0	NL	VG	VG	P-G	F-G	U	VG-E	P	F	R5
7	Boscalid 70%	Endura 0.7 DF	3.5 - 11.0	U	NL	VG	U	P	NL	NL	U	VG	21 days
	Inpyrfluxam 31.25%	Excalia SC	2.0	E	NL	NL	NL	NL	NL	U	NL	NL	R5
1	Thiophanate-methyl	Topsin-M, multiple generics	10.0 - 20.0	U	U	U	F	VG	U	G	U	F	21 days
29	Fluazinam 40.0%	Omega 500 DF	0.75 - 1.0 pts	NL	NL	NL	NL	NL	NL	NL	U	G	R3
11 3	Azoxystrobin 25.3% Flutriafol 18.63%	Topguard EQ 4.29 SC	5.0 - 7.0	VG	U	VG	U	G-VG	U	E	Р	U	21 days
11 3	Azoxystrobin 18.2% Difenoconazole 11.4%	Quadris Top 2.72 SC	8.0 - 14.0	U	U	G-VG	P-G	VG	F-G	VG	Р	NL	14 days
11 3	Azoxystrobin 19.8% Difenoconazole 19.8%	Quadris Top SBX 3.76 SC	7.0 - 7.5	VG	U	G-VG	P-G	VG	F-G	VG	F-G	U	14 days
11 3	Azoxystrobin 7.0% Propiconazole 11.7%	Quilt 1.66 SC, multiple generics	14.0 - 20.5	U	U	G	F	F	U	VG	Р	NL	21 days
11 3	Azoxystrobin 13.5% Propiconazole 11.7%	Quilt Xcel 2.2 SE	10.5 - 21.0	E	VG	G	F	F	U	VG	Р	NL	R6
7 11 3	Benzovindiflupyr 2.9% Azoxystrobin 10.5% Propiconazole 11.9%	Trivapro	13.7 - 20.7	E	U	G-VG	P-G	F-G	G	VG-E	U	NL	14 days, R6
3 11	Cyproconazole 7.17% Picoxystrobin 17.94%	Aproach Prima 2.34 SC	5.0 - 6.8	VG	U	G	P-G	F-G	U	VG-E	F-G	NL	14 days
7	Fluopyram 17.4% Prothioconazole 17.4%	Propulse 3.34 SC	6.0 - 10.2	NL	NL	U	NL	U	U	U	NL	G	21 days

	ngicide Efficad ybean Foliar D	·		Aerial web blight	Anthracnose	Brown spot ²	Cercospora leaf blight ³	Frogeye leaf spot ⁴	Diaporthe (Pod and stem blight)	Soybean rust	larget spot	White mold ⁵	Harvest restriction ⁶
	Active ingredient (%)	Product/Trade name	Rate/A (fl oz)	A ii	Ā	B	9 8	Fa Ba	and Dia	ક્રિ	2	s.	Har
7	Bixafen 15.5% Flutriafol 26.47%	Lucento 4.17 SC	3.0 - 5.5	VG	U	VG	F-G	VG	U	VG-E	F-G	U	21 days
11 3	Fluoxastrobin 14.84% Flutriafol 19.3%	Fortix SC, Preemptor SC	4.0 - 6.0	U	U	G-VG	P-G	G-VG	U	U	Р	U	R5
11 3	Trifloxystrobin 13.7% Prothioconazole 16.0%	Delaro 325 SC	8.0 - 11.0	VG	U	VG	U	G-VG	U	U	NL	NL	21 days
7 11 3	Fluopyram 10.9% Trifloxystrobin 13.1% Prothioconazole 14.9%	Delaro Complete 3.83 SC	8.0 - 11.0	U	U	VG	U	U	U	U	NL	U	21 days
7	Pydiflumetofen 6.9% Difenoconazole 11.5%	Miravis Top 1.67 SC	13.7	VG	U	VG	F-G	VG	G	NL	F-G	U	14 days
11 7	Pyraclostrobin 28.58% Fluxapyroxad 14.33%	Priaxor 4.17 SC	4.0 - 8.0	E	VG	G-VG	P-G	P-F	U	VG-E	F-G	Р	21 days
7 11 3	Fluxapyroxad 14.33% Pyraclostrobin 28.58% Tetraconazole 20.50%	Priaxor D 4.17 SC, 1.9 SC	4.0 each component	VG	U	VG	P-G	F-G	G	VG-E	F-G	Р	21 days, R5
11 3	Trifloxystrobin 32.3% Prothioconazole 10.8%	Stratego YLD 4.18 SC ⁷	4.0 - 4.6	VG	VG	G	F	F-G	U	VG	Р	NL	21 days
11 3	Azoxystrobin 9.35% Tetraconazole 7.48%	Affiance 1.5 SC	10.0 - 14.0	U	VG	VG	F	F-G	U	U	Р	NL	14 days, R5
11 3	Fluoxastrobin 17.76% Tetraconazole 17.76%	Zolera FX 3.34 SC	4.4 - 6.8	U	U	U	U	F-G	U	U	U	U	30 days, R5
1	Thiophanate-methyl 21.3% Tetraconazole 4.2%	Acropolis	20.0 - 23.0	NL	U	U	U	VG	U	E	U	U	R5
7 11 3	Fluxapyroxad 7.74% Pyraclostrobin 15.49% Mefentrifluconazole 11.61%	Revytek	8.0 - 15.0	VG	U	VG	F-VG	VG	U	E	F-VG	Р	21 days
11 3	Pyraclostrobin 17.56% Mefentrifluconazole 17.56%	Veltyma	7.0-10.0	U	U	U	U	U	U	U	U	NL	21 days

Sugarcane

- Brown rust
- Orange rust
- Brown stripe





3, 7, 11

Headline[®] 11

Fungicide

Priaxor

7, 11

Xemium® Brand Fungicide

RevytekTM 3, 7, 11

Fungicide

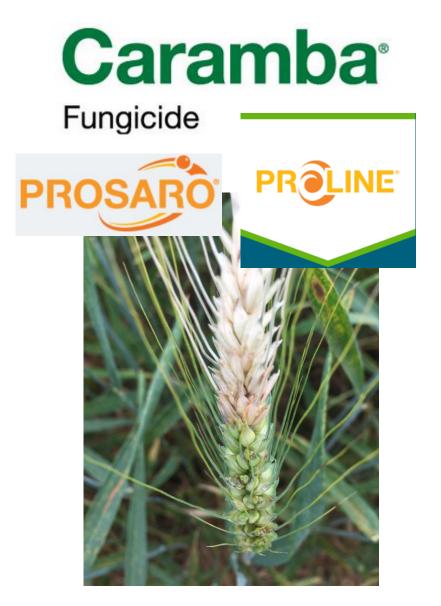
Veltyma[™] 3, 7, 11 Fungicide

Call Jeff Hoy...he doesn't retire until August!





Other Products for Scab Management



W	hea	cy of Fungicio It Disease Cor opriate Applio	ntrol Based o		Powdery mildew	Stagonospora leat/glume blotch	Septoria tritici blotch	ot	rust	¥	ust	cab'	Harvest restriction	
		Active ingredient (%)	Product/Trade name	Rate/A (fl oz)	Powd	Stago leaf/g	Septor	Tan spot	Stripe rust	Leafrust	Stem rust	Head scab ⁴	Harve	LC
æ		Picoxystrobin 22.5%	Aproach SC	6.0 - 12.0	G1	VG	VG ²	VG	E	VG	VG	NL	Feekes 10.5	
Strobilurins	11	Pyraclostrobin 23.6%	Headline SC	6.0 - 9.0	G	VG	VG ²	E	E3	E	G	NL	Feekes 10.5	
Stin		Azoxystrobin 22.9%	Quadris 2.08 SC	4.0 − 12.0 ⁵	G	VG	VG	E	E	E	G	NL	Feekes 10.5.4	
		Metconazole 8.6%	Caramba 0.75 SL	10.0 - 17.0	VG	VG		VG	E	E	E	G	30 days	
		Tebuconazole 38.7%	Folicur 3.6 F ⁶	4.0	NL	NL	NL	NL	E	E	E	F	30 days	Γ Λ
		Prothioconazole 41.0%	Proline 480 SC	5.0 - 5.7		VG	VG	VG	VG	VG	VG	G	30 days	
Triazoles	3	Prothioconazole 19.0% Tebuconazole 19.0%	Prosaro 421 SC	6.5 - 8.2	G	VG	VG	VG	E	E	E	G	30 days	
		Propiconazole 41.8%	Tilt 3.6 EC ⁶	4.0	VG	VG	VG	VG	VG	VG	VG	Р	Feekes 10.5.4	
		Metconazole 10.91% Prothioconazole 18.19%	Sphaerex	4.0 - 7.3	VG	VG	VG	VG	E	E	E	G	30 days	W١
	11 3	Trifloxystrobin 22.6% Tebuconazole 22.6%	Absolute Maxx SC	5.0	G	VG	VG	VG	VG	E	VG	NL	35 days	
	11 3	Picoxystrobin 17.9% Cyproconazole 7.17%	Aproach Prima SC	3.4 - 6.8	VG	VG	VG	VG	E	VG		NR	45 days	
	11 3	Trifloxystrobin 13.7% Prothioconazole 16.0%	Delaro 325 SC	8.0	G	VG	VG	VG	VG	VG	7 V 3		flumetofen 13.7% iconazole 11.4%	Miravis Ace SE
											7		apyroxad 2.8%	Newices FC
											1		clostrobin 18.7%	Nexicor EC
											7		iconazole 11.7% apyroxad 14.3%	
											1		clostrobin 28.6%	Priaxor
											1	<u> </u>	ystrobin 13.5%	
\	\ A		nroto	ctio	nr			rl		ra			iconazole 11.7%	Quilt Xcel 2.2 SE ⁷
VV	VV	w.crop	<u>phinte</u>				VU			<u>n B</u>	2 1		oxystrobin 32.3%	
											3	Prot	hioconazole 10.8%	Stratego YLD
											7	Benz	zovindiflupyr 2.9%	
											1	I Azox	strobin 10.5%	Trivapro SE
											3	Prop	iconazole 11.9%	
											1	l Azox	ystrobin 25.30%	Topguard EQ
							3	Flutr	iafol 18.63%	in py dana co				

Louisiana Plant Disease Management Guide

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			_								
ydiflumetofen 13.7%	Miravis Ace SE	13.7	VG	VG	VG	VG	VG	VG	VG	G°	Feekes 10.5.4
ropiconazole 11.4%	Mildels Ace SE	15.7	VU.	VG.	VU.	VU.	NU.	10	V u	u.	Teekes 10.3.4
luxapyroxad 2.8%											
yraclostrobin 18.7%	Nexicor EC	7.0 - 13.0	VG	VG	E	E	E	E	VG	NL	Feekes 10.5
ropiconazole 11.7%											
luxapyroxad 14.3%	Priaxor	4.0 - 8.0	G	VG	VG	E	VG	VG	G	NL	Feekes 10.5
yraclostrobin 28.6%	FIIdXUI	4.0 - 8.0	u	VG	VG	E	Vu	VG	u	NL	reekes 10.5
zoxystrobin 13.5%	Quilt Yest 2 2 CF7	10.5 - 14.0	VG	VG	VG	VG	E	E	VG	NL	Feekes 10.5.4
ropiconazole 11.7%	Quilt Xcel 2.2 SE ⁷	10.5 - 14.0	VG	VG	VG	VG	E	E	VG	NL	Feekes 10.5.4
rifloxystrobin 32.3%	Charles and MLD			110							Feekes 10.5
rothioconazole 10.8%	Stratego YLD	4.0	G	VG	VG	VG	VG	VG	VG	NL	35 days
enzovindiflupyr 2.9%											
zoxystrobin 10.5%	Trivapro SE	9.4 - 13.7	VG	VG	VG	VG	E	E	VG	NL	Feekes 10.5.4
ropiconazole 11.9%											
zoxystrobin 25.30%	T	40.70					-	-			Feekes 10.5.4
lutriafol 18.63%	Topguard EQ	4.0 - 7.0	VG	NL	VG	VG	E	E	VG	NL	35 days

Generic Active Ingredients for Use in Most Crops

- Azoxystrobin (Quadris)
- Propiconazole (Tilt)
- Tebuconazole (Folicur)
- Tetraconazole (Domark)
- Prothioconazole (Proline)

- Many different commercial products
- Lots of companies
- Many different pre-mixes
- Refer to Als on the efficacy table to get an idea of what fungicides would be useful on...



	Acuron GT	Halex GT						
	3.75 pt/A	3.6 pt/A	3.75 pt/A	4 pt/A				
S-metolachlor (7.62 lb/gal formulation)	15.8 oz/A	15.4	16.5	17.6				
glyphosate (4.5 lb/gal formulation)	25.1	24.4	26.1	27.9				
mesotrione	3	2.9	3.1	3.3				
bicyclopyrone	0.045 lb/A							

- acetochlor
- flumetsulam
- clopyralid
- 1.5 to 2.5 pt/A
- PRE and POST up to 11-inches
- 8 to 9 on most weeds
- Rotation?
 - Cotton 26 months
 - Grain sorghum 12 months
 - Soybean spring following application
 - Wheat 4 months





- acetochlor
- mesotrione
- clopyralid
- 2.25 to 2.75 pt/A
- PRE and POST up to 11-inches
- 7 on grass species, 9 on most broadleaf species
- Rotation?
 - Cotton 12 months
 - Grain sorghum 10 ½ months
 - Soybean 10 ½ months
 - Wheat 4 months





- tolpyralate
- HPPD-inhibitor
- 1 to 1.35 oz/A
- POST up to V6 or 20-inches
- 1% MSO or COC required
- 6 on grass species, 7 to 9 on most broadleaf species
- 5 on sicklepod
- Needs atrazine as tank-mix partner
- Rotation?
 - Cotton 9 months
 - Grain sorghum 9 months
 - Soybean 9 months
 - Wheat 3 months

SHIELDEX[®]400SC HERBICIDE



- topramezone
- glufosinate
- 21 to 28 oz/A
 - Impact 0.75 to 1 oz/A
 - Liberty 22 to 30 oz/A
- POST emergence to V7
- 1% MSO and 1.5 lb/A AMS required
- 7 to 9 on most weed species
- Spectrum improved with atrazine as tank-mix partner
- Rotation?
 - Cotton 9 months
 - Grain sorghum 9 months
 - Soybean 9 months
 - Wheat 3 months





- tiafenacil
- 1 to 3 oz/A
- nonselective
- 1% MSO or COC required
- Spectrum improved with glyphosate as tank-mix partner
- Not a paraquat replacement
- Research ongoing evaluating it as soybean desiccant



Rogue SC



- Gowan
- benzobicyclon
- Labelled in 2022 for use in drill and water-seeded rice
- Must be applied in flood, not active on dry ground
 - 8.4 to 12.6 fl oz/A
 - Dry-seeded: 4 leaf to 2 tillers
 - Water-seeded: Peg to 2 tillers
- Activity on ducksalad, sprangletop species, and rice flatsedge

Arroz 80



- Bispyribac 80%
- Same formulation as Regiment
- AMVAC
- Labelled in 2022
- 0.4 0.67 oz/A
- Maximum of 1.06 oz/A per year
- See approved adjuvant bulletin

Rinde SL



- Prepackaged mixture of Facet and Regiment
- AMVAC: to be available in 2023
- 22-36 oz/A

Rinde	Equivalent to	a Tankmix of:
Formulated Rate (FI Oz/Ac)	Facet L (FI Oz/AC)	Regiment 80 (Oz/AC)
22	22	0.413
24	24	0.450
26	26	0.488
28	28	0.525
30	30	0.563
32	32	0.600
34	34	0.638
36	36	0.675

Rinde SL



- Timing: 3 leaf to green ring
- Apply with an adjuvant plus a nitrogen source
 - Ex. Dyne-A-Pak or PhaseII
 - If chosen adjuvant does not have a nitrogen source then add a ureaammonium nitrate for optimal control
 - See approved adjuvant bulletin

Approved Adjuvant Bulletin



ARROZ 80' HERBICIDE APPROVED SURFACTANTS

Arraz 80° Herbicide provides effective and flexible barnyardgrass, aquatic and broadleaf weed control.

Product	Minimum Use Rate		
	fl oz/100 gal	fi oz/A	
AirForce* + UAN	32 + 128	3.2 + 12.8	
Cadence*	16	1.6	
Dyne-Amic*	50	5.0	
Dyne-A-Pak*	128-192	12.8-19.2	
Freeway*	16	1.6	
inergy*	96	9.6	
Invade Xtra*	128	12.8	
Kinetic* HV	32	32	
Persist® Advanced + UAN	48 + 128	4.8 + 12.8	
Phase*	32	3.2	
Phase ^a II	128	12.8	
Renegade*	128	12.8	
Rivet"	96	9.6	
Silkin*	24	2.4	
Syl-Tac*	32	3.2	
Triple Play"	128	12.8	
Volare" + UAN	64 + 128	6.4 + 12.8	

The addition of 2% volume/volume (v/v) 32% or 28% UAN (urea amonium nitrate) to one of the above listed surfacents (except Dyne-A-Pak, Phase II and Triple Play which already contain UAN) is recommended and may enhance the activity of **Arroz 80** when applied under some conditions. The addition of 32% or 28% UAN at 1% v/v to AirForce, Persist and Volare adjuvants is required when used with **Arroz 80**. UAN is not a substrue for an approved adjuvant. Instead, if should be used in combination with one of the approved adjuvants.

Arrow 80 is exclusively sold by Helens Agri-Enterpreset. See AMVAC's entire line of products at AMVAC.enm.





VICES CONTRACTOR DECOULTS IN ANY PRODUCTION

Arroz 80 Herbicide HRAC Group 2

PAMVAC

4/20

Tendovo	Bou	ndary
3.5 pt/A	3.5 pt/A	4 pt/A
25.5 oz/A	16.5	22.1
6.1	5	6.67
5.4		
	3.5 pt/A 25.5 oz/A 6.1	3.5 pt/A 3.5 pt/A 25.5 oz/A 16.5 6.1 5

7 different products with Authority in their name

• All contain sulfentrazone

S-metolachlor

Excellent residual morningglory control ٠





pyroxasulfone

- A. Supreme has 2.08 lb ai/gal
- A. Edge has 1.52 and 2.73 lb ai/gal of pyroxasulfone and sulfentrazone



cloransulam-methyl







Newly Registered Sugarcane Herbicides for 2023

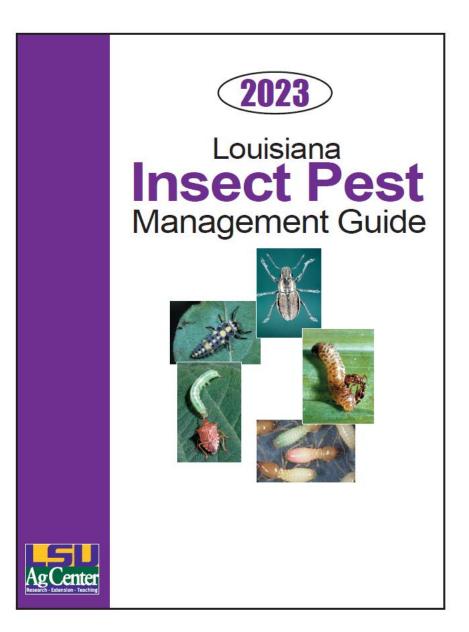


A University Perspective on New Products for Managing Pests in Louisiana Field Crops

Entomology Section

James Villegas Field Crops Entomologist LSU AgCenter Dean Lee Research and Extension Center





PLINAZOLIN®



- Mode of Action IRAC Group 30
- Good activity towards stinkbugs in *Lygus spp.*
- Maybe available for use in 2025





- Bt trait Cry51Aa1
- Specific to hemipteran and coleopteran insect pests
- Commercially available in time for the 2023 cotton season







- Mode of Action IRAC Group 28
- Rate 1.2 2.5 fl oz/ A
- New for 2023
- pre-emergence application in rice for RWW
- Preflood application in rice anticipated for 2025

Chlorantraniliprole patent expired? What's next?



- Active Ingredients bifenthrin and chlorantraniliprole
- Mode of Action IRAC Group 3A and 28
- Rate 5.6 9.6 fl oz/ A

- Active Ingredients lambdacyhalothrin and chlorantraniliprole
- Mode of Action IRAC Group 3A and 28
- Rate 6 10 fl oz/ A

FIFRA Section 2(ee) Recommendation



FOR DISTRIBUTION AND USE ONLY IN THE STATES OF ALABAMA, ARKANSAS, GEORGIA, KENTUCKY, LOUISIANA, MISSISSIPPI, OKLAHOMA, SOUTH CAROLINA, AND TENNESSEE



EPA Reg. No. 59639-150

BELAY[®] INSECTICIDE FOR THE CONTROL OF REDBANDED STINK BUG (*Piezodorus guildinii* Westwood) IN SOYBEANS

BELAY INSECTICIDE APPLICATION TO SOYBEANS

	FOLIAR APPLICATION			
Pest	Belay Insecticide Application Rate	Mixture partner application rate	Instructions	
Redbanded stink bug	2.0 fl oz/A (0.03 lb ai/A)	Bifenthrin 0.06 to 0.10 lb ai/A	For the control of adults and immature stages of redbanded stinkbug. Bifenthrin will aid by delivering a faster knockdown of adults.	
	2.0 fl oz/A (0.03 lb ai/A)	Acephate 0.75 to 1.0 lb ai/A	For the control of adults and immature stages of redbanded stinkbug. Acephate will aid by delivering a faster knockdown of adults.	

Endangered Species Act (ESA) Biological Evaluation for Sulfoxaflor

Transform[®] WG

Insecticide Group





Isoclast" active

Communication Update

Dear Business Partner,

I'm happy to share with you that the U.S. Court of Appeals for the Ninth Circuit issued a decision on December 21 that allows sulfoxaflor products – those products containing Isoclast[™] active – to remain on the market and pursuant to current labeling while the U.S. Environmental Protection Agency conducts additional assessments and administrative processes that the court determined are necessary.

With this news, growers can continue to use sulfoxaflor to effectively control costly pests and protect the quality, health and economic viability of their crops. Sulfoxaflor is an important tool for growers to effectively control tough pests, reduce the number of applications and help mitigate the development of resistance.

Reach out to your Corteva Agriscience representative with any questions.

Thank you,

Jaret Fipps U.S. Portfolio Marketing Leader – Specialty Crops