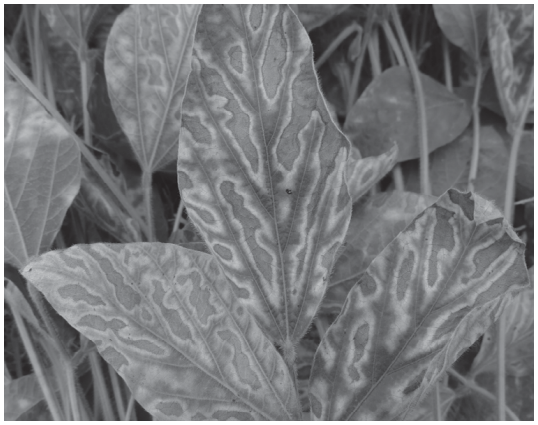
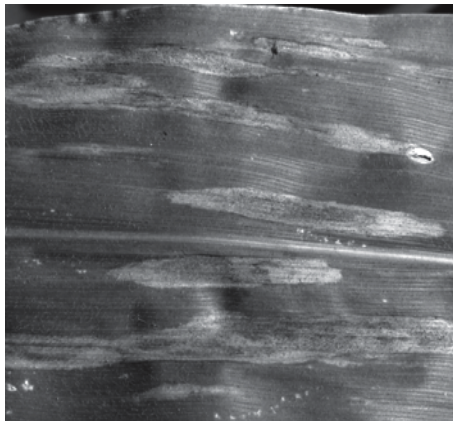
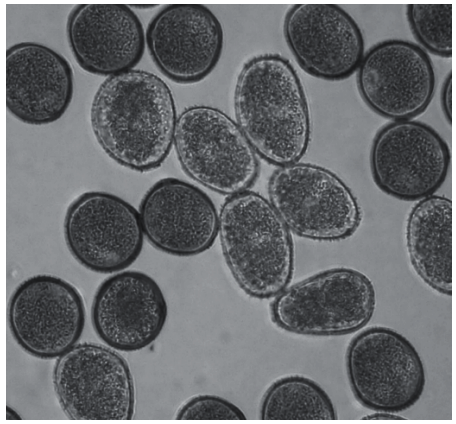
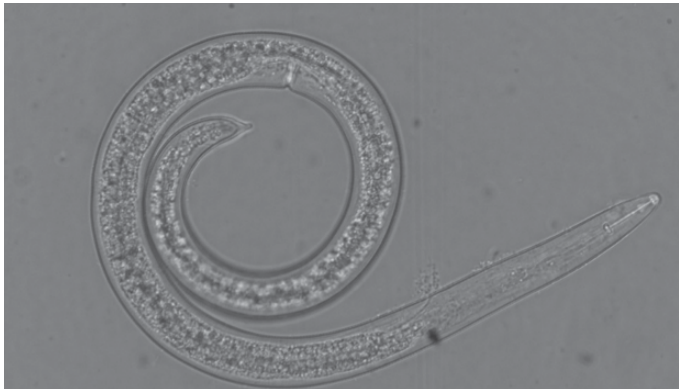
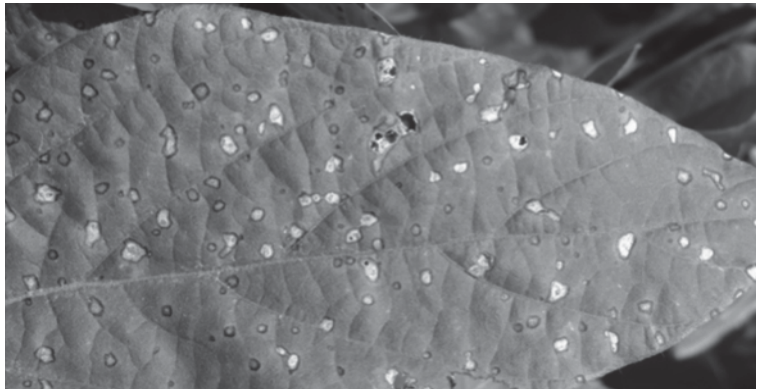
DIVISION OF AGRICULTURE
RESEARCH & EXTENSION
University of Arkansas System

MP154

2021 Arkansas Plant Disease Control Products Guide



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DISCLAIMER

The listing of any product in this publication does not imply endorsement of that product or discrimination against any other product by the University of Arkansas System Division of Agriculture.

The information in this publication was current as of October 1, 2020, and applies only to Arkansas. It may not be appropriate for other states or locations.

Every effort was made to ensure accuracy, but the user of any crop protection product must read and follow the most current label on the product – *The Label is the Law.* For further assistance, contact your local office of the University of Arkansas System Division of Agriculture, Cooperative Extension Service.

WARNING

Many crop protection products may be poisonous, especially in concentrated form. The United States Environmental Protection Agency has established a Poison Control System throughout the United States. Each Center can determine the toxic compounds in commercial products, respond to calls from physicians or individuals and provide supportive or antidotal treatment.

THE POISON CONTROL CENTER FOR ARKANSAS IS:

Arkansas Poison & Drug Information Center
College of Pharmacy, University of Arkansas for Medical Sciences
4301 W. Markham, Mail Slot 522-2
Little Rock, AR 72205

POISON CONTROL HOTLINE – TOLL-FREE PHONE NUMBER

1-800-376-4766

PESTICIDE SPILLS – OFFICE OF EMERGENCY SERVICES

1-800-322-4012

TABLE OF CONVERSIONS

TO CONVERT	TO	MULTIPLY BY
oz dry wt/100 gals	Tbs/gal	0.06
	tsp/gal	0.19
lb dry wt/100 gals	Tbs/gal	1.00
fl oz/100 gals	Tbs/gal	0.02
	tsp/gal	0.06
pints/100 gals	Tbs/gal	0.32
	tsp/gal	0.96
	fl oz/gal	0.16
quarts/100 gals	Tbs/gal	0.64
	tsp/gal	1.92
	fl oz/gal	0.32
fl oz	Tbs	2.00
	tsp	6.00

Dry Measure

28.35 grams = 1 ounce	16 oz = 1 lb = 453.6 grams	1 gal water = 8.34 lbs

Liquid Measure

80 drops = 1 tsp 8 fl oz = 16 Tbs = 1 cup = 237 ml 4 quarts = 256 Tbs = 1 gal = 3,785 ml	3 tsp = 1 Tbs = 14.8 ml 2 cups = 32 Tbs = 1 pint = 473 ml 128 fl oz = 1 gal = 3,785 ml	2 Tbs = 1 fl oz = 29.6 ml 2 pints = 64 Tbs = 1 qt = 946 ml

Land Measure

16.5 ft = 5.5 yds = 1 rod 4,256 sq ft = 16 sq rds = 1 sq chain 208.71 ft x 208.71 ft = 1 sq acre	66 ft = 4 rods = 1 chain 1 acre = 160 sq rds = 43,560 sq ft	1 sq rd = 30.25 sq yds = 272.25 sq ft 1 acre = 10 sq chains = 43,560 sq ft

Row Feet in 1 Acre at Various Row Spacings

6” rows = 87,120 ft 10” rows = 52,272 ft 19” rows = 27,512 ft 36” rows = 14,520 ft 42” rows = 12,446 ft	7” rows = 74,674 ft 12” rows = 43,560 ft 24” rows = 21,780 ft 38” rows = 13,756 ft 48” rows = 10,890 ft	8” rows = 65,340 ft 18” rows = 29,040 ft 30” rows = 17,424 ft 40” rows = 13,068 ft

Crop Standard Weights

Corn = 56 lbs/bu Grain Sorghum = 56 lbs/bu	Oats = 32 lbs/bu Soybean = 60 lbs/bu	Rice = 45 lbs/bu Wheat = 60 lbs/bu

MANAGING FUNGICIDE RESISTANCE

Fungicide resistance is the loss of efficacy of a particular type of fungicide against a target pathogen. Fungicide resistance is often recognized when the expectations of disease control are not met when the labeled rate of a fungicide is applied.

All fungicide products have a specific mode of action (MOA), which is the way in which the fungicide affects (kills) pathogens. All fungicides are classified by MOA, and **each MOA is assigned a group code called a FRAC number that will appear somewhere on the product label**. FRAC stands for the *Fungicide Resistance Action Committee*, which is a technical group of specialists that provides fungicide resistance management guidelines to prolong the effectiveness of "at risk" fungicides and to limit crop losses due to fungicide-resistant pathogens. See www.frac.info for the most up-to-date information on fungicide resistance and FRAC codes.

The following are some basic guidelines that should be considered in developing a fungicide program to avoid inadvertently selecting fungicide-resistant pathogens.

Fungicide Resistance Management Guidelines

1. Obtain an accurate disease diagnosis. This allows fungicide selection to be made correctly to minimize the chance of applying an ineffective fungicide.

2. DO NOT apply fungicides in the absence of disease.

3. Avoid the exclusive use of a fungicide product with a single MOA or FRAC Code.

4. Rotate different MOA or FRAC Code fungicide applications if more than one application is needed within a season.

5. Use the manufacturer's recommended rates as indicated on the label.

6. Utilize integrated disease management strategies (including host plant resistance, crop rotation, crop residue management, removal of diseased tissue on perennial crops, etc.).

SOYBEAN – SEEDLING DISEASES

Terry Spurlock

Disease	Fungicide	Active Ingredient	FRAC Code	Rate/cwt Seed	Comments
Seed Rots Damping-Off Complex (Seedling Diseases) (Pythium, Rhizoctonia, etc.)	Trilex 2000 1.15 FC	trifloxystrobin + metalaxyl	11 4	1 fl oz	
	CruiserMaxx Vibrance 2.49 FS	thiamethoxam + mefenoxam + fludioxonil + sedaxane	--- 4 12 7	3.22 fl oz	Commercial seed treatment only.
	Maxim 4 FS or Allegiance 1.63 LS or Apron XL 3 SC	fludioxonil + metalaxyl + mefenoxam	12 4 4	0.08 - 0.16 fl oz 1.2 - 2.4 fl oz 0.16 - 0.64 fl oz	For on-farm or commercial use with slurry or mist treaters.
	Vitavax M 11.4 F + Allegiance 1.63 LS	carboxin + thiram + molybdenum + metalaxyl	7 M3 --- 4	9 - 12 fl oz 1.2 - 2.4 fl oz	For on-farm or commercial use with slurry or mist treaters or as a planter-box treatment.
	ApronMaxx RFC 0.52 FS	mefenoxam + fludioxonil	4 12	1.5 fl oz	
	ApronMaxx RTA + Moly 0.16 FC	mefenoxam + fludioxonil + molybdenum	4 12 ---	5 fl oz	
	EverGol Energy 1.47 FS	prothioconazole + penflufen + metalaxyl	3 7 4	1 oz	Commercial seed treatment only.
	Stamina 1.67 FC	pyraclostrobin	11	0.4 fl oz	For use by commercial seed treaters only.
	Vibrance 4.3 FS	sedaxane	7	0.08 - 0.16 fl oz	Specific for Rhizoctonia pathogens.
	Vibrance Trio 1.66 FC	fludioxonil + sedaxane + mefenoxam	12 7 4	1.55 fl oz/cwt	
Soilborne Diseases					
Though Sudden Death Syndrome is a soilborne disease that is best management with host plant resistance. Some seed applied fungicides can provide some suppression of seedling infection.					
	ILeVO 5 FC	fluopyram	7	0.15 - 0.25 mg ai/seed	Suppression of seedling infection of sudden death syndrome. Commercial seed treatment only. Do not feed as forage or hay to livestock.
	Saltro 4.17 FC	pydiflumetofen	7	0.075 mg ai/seed	Do not feed as forage or hay to livestock. Rate is 0.714 fl oz/140,000 seed or 1.52 fl oz/cwt.

NOTE: Metalaxyl and mefenoxam have activity against Pythium and Phytophthora fungi while all others listed are more active against Rhizoctonia, Fusarium and various true fungi. A combination of the two chemistries provides broadest spectrum control. If an inoculant is to be used, it should be applied after fungicide seed treatments have dried and/or right before planting. Seed treatments often have not resulted in improved stands or yields in University trials unless less-than-optimum planting conditions are prevalent (early planting, heavy clay soils, cool, wet conditions, etc.).

SOYBEAN – FOLIAR DISEASES

Travis Faske and Terry Spurlock

Disease	Fungicide	Active Ingredient	FRAC Code	Rate/Acre	Days to Harvest	Comments
Aerial Blight	Quadris 2.08 SC (multiple generics)	azoxystrobin	11	6 - 15.5 fl oz	14	Apply at first sign of disease for maximum control. Applications after significant disease development will result in poor control. Use the high rates under conditions favorable for severe disease development, dense plant canopies or when highly susceptible varieties are planted.
	Headline 2.09 SC*	pyraclostrobin	11	6 - 12 fl oz	21	
	Froghorn 4.30 SC	tebuconazole + thiophanate-methyl	3 + 1	20 fl oz	21	
	Miravis Top 1.67 SC	difenoconazole + pydiflumetofen	3 + 7	13.7 fl oz	14	
	Quadris Top SBX 3.76 SC	azoxystrobin + difenoconazole	11 + 3	7 fl oz	30	
	Topquard EQ 4.29 SC	azoxystrobin + flutriafol	11 + 3	5 - 7 fl oz	21	
	Quilt Xcel 2.2 SE, Cover XL 2.2 SE	azoxystrobin + propiconazole	11 + 3	10.5 - 14 fl oz	See label	
	Helmstar Plus 3.0 SC	azoxystrobin + tebuconazole	11 + 3	7.2 fl oz	21	
	Affiance 1.5 SC*	azoxystrobin + tetraconazole	11 + 3	14 fl oz	14	
	Zolera FX 3.34 SC	fluoxastrobin + tetraconazole	11 + 3	4.4 - 6.8 fl oz	30	
	Aproach Prima 2.34 SC*	picoxystrobin + cyproconazole	11 + 3	5 - 6.8 fl oz	30	
	Stratego 2.08 SC*	trifloxystrobin + propiconazole	11 + 3	10 fl oz	21	
	Stratego YLD 4.18 SC*	trifloxystrobin + prothioconazole	11 + 3	4 - 4.6 fl oz	21	
	Priaxor 4.17 SC*	pyraclostrobin + fluxapyroxad	11 + 7	4 - 8 fl oz	21	
	Trivapro 2.21 SE	benzovindiflupyr + azoxystrobin + propiconazole	7 + 11 + 3	13.7 fl oz	14	

Frogeye Leaf Spot:
Apply in presence of disease for maximum control on susceptible varieties. Applications between R3 and R4 growth stages have been effective when conditions favor disease on susceptible variety. A strobilurin fungicide (FRAC Code 11) alone will not adequately control strains for frogeye leaf spot that are resistant to this class of fungicide. Some DMI fungicides (FRAC code 3) can cause phytotoxicity, which is similar in appearance to sudden death syndrome. Typically this appear 14 days after application.

General Seed Quality: An application between R2 and late R5 has been used by seed producers for general seed quality protection.

Anthracnose, Frogeye leaf spot, Pod and stem blight, Cercospora leaf blight, and general seed quality diseases	Cercobin 4.11 SC	thiophanate-methyl	1	10.9 - 21.8 fl oz	21	
	Thiophanate-Methyl 85 WDG	thiophanate-methyl	1	0.4 - 0.8 lb	21	
	Topsin 4.5 L	thiophanate-methyl	1	10 - 20 fl oz	21	
	Topsin 70 WDG	thiophanate-methyl	1	0.5 - 1 lb	21	
	Alto 100 SL	cyproconazole	3	4 - 5.5 fl oz	30	
	Topguard 1.04 SC	flutriafol	3	7 - 14 fl oz	21	
	Tilt, Bumper, or multiple generics 41.8 EC	propiconazole	3	4 - 6 fl oz	See label	
	Proline 480 SC	prothioconazole	3	2.5 - 3 fl oz	21	
	Domark 230 ME	tetraconazole	3	4 - 5 fl oz	See label	
	Adiamo 230 ME	tetraconazole	3	4 - 5 fl oz	R5	Apply as a curative application when disease incident does not exceed 5% of the plants.

(continued)

SOYBEAN – FOLIAR DISEASES (continued)

Disease	Fungicide	Active Ingredient	FRAC Code	Rate/Acre	Days to Harvest	Comments
Anthracnose, *(cont.)* Frogeye leaf spot, Pod and stem blight, Cercospora leaf blight, and general seed quality diseases	Quadris 2.08 SC (multiple generics)	azoxystrobin	11	6 - 15.5 fl oz	14	
	Evito 480 SC, Aftershock 480 SC	fluoxastrobin	11	2 - 5.7 fl oz	30	
	Aproach 2.08 SC	picoxystrobin	11	6 - 12 fl oz	14	
	Headline 2.09 SC	pyraclostrobin	11	6 - 12 fl oz	21	
	GEM 500 SC	trifloxystrobin	11	3 - 3.5 fl oz	21	
	Topsin XTR 4.3 F	thiophanate-methyl + tebuconazole	1 + 3	20 fl oz	21	
	Froghorn 4.3 SC	thiophanate-methyl + tebuconazole	1 + 3	20 fl oz	21	
	Acropolis 2.38 F	thiophanate-methyl + tetraconazole	1 + 3	20 - 23 fl oz	R5	
	Lucento 4.17 SC	flutriafol + bixafen	3 + 7	3 - 5.5 fl oz	21	In university trials 5 oz/A was the most effective rate.
	Miravis Top 1.62 SC	difenconazole + pydiflumetofen	3 + 7	13.7 fl oz	14	
	Quadris Top SBX 3.76 SC	azoxystrobin + difenoconazole	11 + 3	7 fl oz	14	
	Topguard EQ 4.29 SC	azoxystrobin + flutriafol	11 + 3	5 - 7 fl oz	21	
	Custodia 2.67 SC	azoxystrobin + tebuconazole	11 + 3	8.6 fl oz	21	
	Helmstar Plus 3.0 SC	azoxystrobin + tebuconazole	11 + 3	7.2 fl oz	21	
	Quilt Xcel 2.2 SE, Cover XL 2.2 SE	azoxystrobin + propiconazole	11 + 3	10.5 - 14 fl oz	See label	
	Affiance 1.5 SC	azoxystrobin + tetraconazole	11 + 3	10 - 14 fl oz	14	
	Brixen 1.85 SC	azoxystrobin + tetraconazole	11 + 3	13 - 16 fl oz	14	
	Fortix 3.22 SC, Preemptor 3.22 SC	fluoxastrobin + flutriafol	11 + 3	5 - 6 fl oz	30	
	Evito T 4.0 SC	fluoxastrobin + tebuconazole	11 + 3	4 - 6 fl oz	30	
	Zolera FX 3.34 SC	fluoxastrobin + tetraconazole	11 + 3	4.4 - 6.8 oz	30	
	Aproach Prima 2.34 SC	picoxystrobin + cyproconazole	11 + 3	5 - 6.8 fl oz	30	
	Veltyma 3.34 SC	pyraclostrobin + mefentrifluconazole	11 + 3	7 - 10 fl oz	21	
	Stratego 2.08 SC	trifloxystrobin + propiconazole	11 + 3	10 fl oz	21	
	Stratego YLD 4.18 SC	trifloxystrobin + prothioconazole	11 + 3	4 - 4.6 fl oz	21	
	Priaxor 4.17 SC	pyraclostrobin + fluxapyroxad	11 + 7	4 - 8 fl oz	21	
	Trivapro 2.21 SE	benzovindiflupyr + azoxystrobin + propiconazole	7 + 11 + 3	13.7 fl oz	14	
	Revytek 3.33 SC	fluxapyroxad + pyraclostrobin + mefentrifluconazole	7 + 11 + 3	8 - 15 fl oz	21	
	Mazinga ADV 3.23 SC	tetraconazole + chlorothalonil	M5 + 3	2 pt	R5	
	Arius ADV 6.65 SC	chlorothalonil + azoxystrobin	M5 + 11	20 - 25 fl oz	42	

SOYBEAN – FOLIAR DISEASES (continued)

Disease	Fungicide	Active Ingredient	FRAC Code	Rate/Acre	Days to Harvest	Comments
	Alto 100 SL	cyproconazole	3	4 - 5.5 fl oz	30	When soybean rust is present and conditions favor disease development, use high rates combined with additional triazole for improved rust control.
	Topguard 1.04 SC	flutriafol	3	7 - 14 fl oz	21	
	Tilt, Bumper, or multiple generics 41.8 EC	propiconazole	3	4 - 6 fl oz	See label	
	Proline 480 SC	prothioconazole	3	2.5 - 3 fl oz	21	
	tebuconazole (multiple generics 3.6 F)	tebuconazole	3	3 - 4 fl oz	21	
	Domark 230 ME	tetraconazole	3	4 - 5 fl oz	See label	
	Adiamo 230 ME	tetraconazole	3	4 - 5 fl oz	R5	
	Quadris 2.08 SC	azoxystrobin	11	6 - 15.5 fl oz	14	
	Headline 2.09 SC	pyraclostrobin	11	6 - 12 fl oz	21	
	Topsin XTR 4.3 F	thiophanate-methyl + tebuconazole	1 + 3	20 fl oz	21	
	Froghorn 4.3 SC	thiophanate-methyl + tebuconazole	1 + 3	20 fl oz	21	
	Trivapro 2.21 SE	benzovindiflupyr + azoxystrobin + propiconazole	7 + 11 + 3	13.7 fl oz	14	
	Revytek 3.33 SC	fluxapyroxad + pyraclostrobin + mefentrifluconazole	7 + 11 + 3	8 - 15 fl oz	21	
	Acropolis 2.38 F	thiophanate-methyl + tetraconazole	1 + 3	20 - 23 fl oz	R5	
	Topquard EQ 4.29 SC	azoxystrobin + flutriafol	11 + 3	5 - 7 fl oz	21	
	Quilt Xcel 2.2 SE, Cover XL 2.2 SE	azoxystrobin + propiconazole	11 + 3	14 - 21 fl oz	See label	
	Helmstar Plus 3.0 SC	azoxystrobin + tebuconazole	11 + 3	7.2 fl oz	21	
	Affiance 1.5 SC	azoxystrobin + tetraconazole	11 + 3	10 - 14 fl oz	14	
	Brixen 1.85 SC	azoxystrobin + tetraconazole	11 + 3	13 - 16 fl oz	14	
	Aproach Prima 2.34 SC	picoxystrobin + cyproconazole	11 + 3	5 - 6.8 fl oz	30	
	Veltyma 3.34 SC	pyraclostrobin + mefentrifluconazole	11 + 3	7 - 10 fl oz	21	
	Stratego 2.08 SC	trifloxystrobin + propiconazole	11 + 3	10 fl oz	21	
	Stratego YLD 4.18 SC	trifloxystrobin + prothioconazole	11 + 3	4 - 4.6 fl oz	21	
	Priaxor 4.17 SC	pyraclostrobin + fluxapyroxad	11 + 7	4 - 8 fl oz	21	
	Mazinga ADV 3.23 SC	tetraconazole + chlorothalonil	M5 + 3	2 pt	R5	
	Arius ADV 6.65 SC	chlorothalonil + azoxystrobin	M5 + 11	20 - 25 fl oz	42	

*Use for control of aerial blight is based on other states' data.

Management of Soybean Diseases – Fungicide Efficacy for Control of Foliar Soybean Diseases *(January 2020)*

The North Central Regional Committee on Soybean Diseases (NCERA-137) has developed the following information on foliar fungicide efficacy for control of major foliar soybean diseases in the United States. Efficacy ratings for each fungicide listed in the table were determined by field-testing the materials over multiple years and locations by the members of the committee. Efficacy ratings are based upon level of disease control achieved by product and are not necessarily reflective of yield increases obtained from product application. Efficacy depends upon proper application timing, rate and application method to achieve optimum effectiveness of the fungicide as determined by labeled instructions and overall level of disease in the field at the time of application. Differences in efficacy among fungicide products were determined by direct comparisons among products in field tests and are based on a single application of the labeled rate as listed in the table, unless otherwise noted. **This table includes systemic fungicides available that have been tested over multiple years and locations. The table is not intended to be a list of all labeled products[1]**. Efficacy categories: NR = Not Recommended; P = Poor; F = Fair; G = Good; VG = Very Good; E = Excellent; NL = Not Labeled for use against this disease; U = Unknown efficacy or insufficient data to rank product efficacy.

NOTE: This guideline was a composite of several field trials from multiple states across the U.S. soybean belt and may not always reflect fungicide efficacy observed in Arkansas.

Fungicide(s)				Aerial Web Blight	Anthrac-nose	Brown Spot	Cercospora Leaf Blight[2]	Frogeye Leaf Spot[3]	*Phomopsis/ Diaporthe* (Pod and Stem Blight)	Soybean Rust	Target Spot	Harvest Restriction[4]
Class	Active Ingredient (%)	Product/ Trade Name	Rate/A (fl oz)									
QoI Strobilurins Group 11	Azoxystrobin 22.9%	Quadris 2.08 SC	6 - 15.5	VG	VG	G	F	P	U	G-VG	P-F	14 days
	Fluoxastrobin 40.3%	Aftershock 480 SC Evito 480 SC	2 - 5.7	VG	G	G	F	P	U	U	U	R5 (beginning seed) 30 days
	Picoxystrobin	Aproach 2.08 SC	6 - 12	VG	G	G	F	P	U	G	U	14 days
	Pyraclostrobin 23.6%	Headline 2.09 EC/SC	6 - 12	VG	VG	G	F	P	U	VG	P-F	21 days
DMI Triazoles Group 3	Cyproconazole 8.9%	Alto 100 SL	2.75 - 5.5	U	U	VG	F	F	U	VG	U	30 days
	Flutriafol 11.8%	Topguard 1.04 SC	7 - 14	U	VG	VG	F	VG	U	VG-E	P	21 days
	Propiconazole 41.8%	Tilt 3.6 EC Multiple Generics[5]	4 - 6	P	VG	G	NL	F	NL	VG	U	R6
	Prothioconazole 41.0%	Proline 480 SC	5 - 5.7	NL	NL	NL	NL	G-VG	NL	VG	U	21 days
	Tetraconazole 20.5%	Domark 230 ME Multiple Generics	4 - 5	NL	VG	VG	F	G-VG	U	VG-E	P	R5 (beginning seed)
MBC Thiophanates Group 1	Thiophanate-methyl	Topsin-M 70 WP Multiple Generics	10 - 20	U	U	U	F	VG	U	G	U	21 days
SDHI Carboximides Group 7	Boscalid 70%	Endura 0.7 DF	3.5 - 11	U	NL	VG	U	P	NL	NL	U	21 days

Management of Soybean Diseases – Fungicide Efficacy for Control of Foliar Soybean Diseases *(January 2020) – (continued)*

Fungicide(s)				Aerial Web Blight	Anthrac-nose	Brown Spot	Cercospora Leaf Blight[2]	Frogeye Leaf Spot[3]	*Phomopsis/ Diaporthe* (Pod and Stem Blight)	Soybean Rust	Target Spot	Harvest Restriction[4]
Class	Active Ingredient (%)	Product/ Trade Name	Rate/A (fl oz)									
Mixed Modes of Action Group 11 + 3 or 7	**Azoxystrobin 25.3% Flutriafol 16.83%**	**Topguard EQ 4.29 SC**	**5 - 7**	U	U	U	U	G	U	U	P	21 days
	Azoxystrobin 18.2% Difenoconazole 11.4%	**Quadris Top 2.72 SC**	**8 - 14**	U	U	U	U	VG	U	VG	P	14 days
	Azoxystrobin 19.8% Difenoconazole 19.8%	**Quadris Top SBX 3.76 SC**	**7 - 7.5**	U	U	U	U	G-VG	U	U	F-G	14 days
	Azoxystrobin 7.0% Propiconazole 11.7%	**Avaris 1.66 SC Quilt 1.66 SC HM-0812 1.66 SC**	**14 - 20.5**	U	U	G	U	F	U	VG	U	21 days
	Azoxystrobin 13.5% Propiconazole 11.7%	**Quilt Xcel 2.2 SE**	**10.5 - 21**	E	VG	G	F	F	U	VG	P	R6
	Benzovindiflupyr 10.27% Azoxystrobin 13.5% Propiconazole 11.7%	**Trivapro 2.21 EC**	**13.7**	U	U	VG	U	VG	U	U	U	14 days
	Cyproconazole 7.17% Picoxystrobin 17.94%	**Aproach Prima 2.34 SC**	**5 - 6.8**	U	U	U	U	G	U	VG	P	14 days
	Flutriafol 26.47% Bixafen 15.5%	**Lucento 4.17 SC**	**3 - 5.5**	U	U	VG	U	VG	U	U	U	21 days
	Flutriafol 19.3% Fluoxastrobin 14.84%	**Fortix 3.22 SC Preemptor 3.22 SC**	**4 - 6**	U	U	U	U	G	P	U	U	R5 (beginning seed)
	Pydiflumetofen 6.9% Difenoconazole 11.5%	**Miravis Top 1.67 SC**	**13.7**	VG	U	VG	P-G	VG	G	VG	VG	14 days
	Pyraclostrobin 28.58% Fluxapyroxad 14.33%	**Priaxor 4.17 SC**	**4 - 8**	E	VG	E	F	F	U	VG	F-G	21 days
	Pyraclostrobin 28.58% Fluxapyroxad 14.33% Tetraconazole 20.50%	**Priaxor D 4.17 SC 1.9 SC**	**4 (each component)**	U	U	U	U	G	U	VG	F-G	21 days R5 (beginning seed)
	Trifloxystrobin 32.3% Prothioconazole 10.8%	**Stratego YLD 4.18 SC**	**4 - 4.65**	VG	VG	VG	F	F	U	VG	P	21 days
	Tetraconazole 7.48% Azoxystrobin 9.35%	**Affiance 1.5 SC**	**10 - 14**	U	VG	VG	F	G	U	U	U	R5 14 days
	Thiophanate-methyl 17.76% Fluoxastrobin 17.76%	**Zolera FX 3.34%**	**4.4 - 6.8**	U	U	U	U	G	U	U	U	R5 30 days
	Thiophanate-methyl 21.3% Tetraconazole 4.2%	**Acropolis**	**20 - 23**	NL	U	U	U	VG	U	VG	U	R5
	Mefentrifluconazole 11.61% Pyraclostrobin 15.49% Fluxapyroxad 7.74%	**Revytek[12]**	**8 - 15**	U	U	VG	U	VG	U	F-G	P	

[1] Multiple fungicides are labeled for soybean rust only, powdery mildew and alternaria leaf spot, including tebuconazole (multiple products) and Laredo (myclobutanil). Contact fungicides such as chlorothalonil may also be labeled for use.

[2] Cercospora leaf blight efficacy relies on accurate application timing, and standard R3 application timings may not provide adequate disease control. Fungicide efficacy may improve with earlier or later applications. Fungicides with a solo or mixed QoI or MBC mode of action may not be effective in areas where QoI or MBC resistance has been detected in the fungal population that causes Cercospora leaf blight.

[3] In areas where QoI-fungicide resistant isolates of the frogeye leaf spot pathogen are not present, QoI fungicides may be more effective than indicated in this table.

[4] Harvest restrictions are listed for soybean harvested for grain. Restrictions may vary for other types of soybean (edamame, etc.) and soybean for other uses such as forage or fodder.

[5] Multiple generic products containing this mode of action may also be labeled in some states.

Many products have specific use restrictions about the amount of active ingredient that can be applied within a period of time or the amount of sequential applications that can occur. Please read and follow all specific use restrictions prior to fungicide use. This information is provided only as a guide. It is the responsibility of the pesticide applicator by law to read and follow all current label directions. Reference to products in this publication is not intended to be an endorsement to the exclusion of others that may be similar. Persons using such products assume responsibility for their use in accordance with current directions of the manufacturer. Members or participants in the NCERA-137 group assume no liability resulting from the use of these products.

SOYBEAN – NEMATODES

Travis Faske

Nematode	Nematicide	Formulation	Active Ingredient	Rate/Acre	Comments
Soybean Cyst, Root-Knot, Reniform, and Lesion	Telone II 9.85 L[1]	Liquid	1,3-dichloropropene	3 - 6 gal	Inject 12 inches below planting depth and seal immediately with appropriate bedding equipment. Wait 7 - 14 days before planting.
	Avicta 500 FS	Seed treatment	abamectin	0.15 mg ai/ seed	For use by commercial seed treaters only. Use in conjuction with moderately resistant cultivars. Available as Avictia Complete Beans 500.
	ILeVO 600 FS	Seed treatment	fluopyram	0.075 - 0.25 mg ai/seed	Available through commercial seed companies and dealer distributors.
	Saltro 4.17 FC	Seed treatment	pydiflumetofen	1.52 fl oz/cwt	Similar nematode suppression as other seed applied nematicides. 0.714 fl oz/140,000 seed (0.075 mg ai/ seed).
	Poncho/Votivo 5.0 FS	Seed treatment	clothianidin + *Bacillus firmus* I-1582	0.13 mg ai/seed	Commercial seed treatment equipment only.
	Clariva *pn*	Seed treatment	*Pasturia nishizawae*	1.6 fl oz/cwt	Biological control specific to soybean cyst nematodes. Available as Clariva Elite Beans.
	BioST Nematicide 100	Seed treatment	*Burkholderia* spp. A396	3 fl oz/cwt	
Complete seed treatment formulations that include seed-applied nematicides					
	Avictia Complete Beans 500	Seed treatment	abamectin + thiamethoxam + mefenoxam + fludioxinil	6.2 fl oz/cwt (@ 3000 seeds/lb)	Abamectin is the nematicide in this trade name formulation.
	Clariva Elite Beans	Seed treatment	*thiamethoxam + mefenox-am + fludioxinil + sedaxane + Pasteuria nishizawae*	5.6 fl oz/cwt or 2.6 fl oz/140,000 seeds	*P. nishizawae* is the biological nematicide for SCN only in this trade name formulation.

[1]Use where nematode pressure is severe.

RESTRICTED USE PESTICIDES – For sale and use only by licensed/certified applicators or persons under their direct supervision. **These are dangerous pesticides – use caution in handling and read and follow current label directions.** If nematodes are suspected to be causing problems, a diagnostic soil sample should be taken to your county agent for submission to the Cooperative Extension Service Nematode Diagnostic Laboratory. **A small fee is required.**

NOTE: The economic value of using nematicides on Arkansas soybeans is sometimes questionable. The value of soybeans in today's market must be considered. Planting resistant varieties or using crop rotation offers more economical control.