

Comparative fungicide efficacy: Management of white mold in soybeans

North Dakota State University Carrington Research Extension Center; Michael Wunsch, Jesse Hafner, Suanne Kallis, Aaron Fauss, Thomas Miorino

Viature: picoxystrobin (FRAC 11) + prothioconazole (FRAC 3) **Endura:** boscalid (FRAC 7)

year	2024	2024	2024	2024	COMBINED ANALYSIS 4 studies Viature 16 fl oz/ac vs. Endura 6 or 8 oz/ac Two sequential applications of the same fungicide
location	Carrington	Carrington	Carrington	Carrington	
funding	BASF	BASF	BASF	BASF	
variety	XO0602E	P064T04E	AG07XF2	PFS 23XF09	
brand, maturity	xitavo, 0.6	Pioneer, 0.6	Asgrow, 0.7	Peterson Farms, 0.9	
row spacing	14 inches	14 inches	14 inches	14 inches	
seeding rate	165,000 pls/ac	165,000 pls/ac	165,000 pls/ac	140,000 pls/ac	
previous crop	dry edible beans	dry edible beans	dry edible beans	field peas	
planting date	May 15	May 15	May 15	May 11	
disease assessment date	Oct. 1	Oct. 1-2	Oct. 2	Oct. 21	
rows assessed for disease	1	1	1	1	
harvest date	Oct. 4	Oct. 4	Oct. 4	Oct. 23	
dates, applications 1 and 2	July 23, July 30	July 23, July 30	July 23, July 30	July 24, Aug. 2	
interval between applications	7 days	7 days	7 days	9 days	
growth stage, 1st applic.	100% R2	100% R2	100% R2	100% R2	
canopy closure, 1st applic	90-95%	90-95%	90-95%	85-95%	
nozzles, pressure, 1st applic.	AIXR110015, 60 psi	AIXR110015, 60 psi	AIXR110015, 60 psi	AIXR110015, 60 psi	
droplet size, 1st applic.	medium	medium	medium	medium	
canopy closure, 2nd applic.	99-100%	99-100%	99-100%	99-100%	
nozzles, pressure, 2nd applic.	AIXR110015, 40 psi	AIXR110015, 40 psi	AIXR110015, 40 psi	AIXR110015, 40 psi	
droplet size, 2nd applic.	coarse	coarse	coarse	coarse	
adjuvant	Masterlock, 6.4 fl oz/ac	Masterlock, 6.4 fl oz/ac	Masterlock, 6.4 fl oz/ac	none	
fungicide spray volume	15 gal/ac	15 gal/ac	15 gal/ac	15 gal/ac	
application method	hand-held boom	hand-held boom	hand-held boom	hand-held boom	

White mold incidence (% of plants) White mold (% plants)

Non-treated control	86 b	83 b	92 b	20 b	70 b
Endura 6 oz/ac	67 a	44 a	69 a	3 a	46 a
Endura 8 oz/ac	60 a	44 a	71 a	1 a	44 a
Viature 16 fl oz/ac	69 a	46 a	72 a	3 a	48 a
CV:	9.3	16.1	8.5	44	9.4

White mold severity index (% of canopy) White mold (% canopy)

Non-treated control	70 b	68 b	83 b	10 b	58 b
Endura 6 oz/ac	48 a	32 a	54 a	1 a	34 a
Endura 8 oz/ac	43 a	31 a	57 a	0 a	33 a
Viature 16 fl oz/ac	52 a	31 a	56 a	1 a	35 a
CV:	13.9	18.2	10.7	72	15.2

Soybean yield (bu/ac; 13% moisture) Yield (bu/ac)

Non-treated control	28 b	28 b	16 b	64 a	34 b
Endura 6 oz/ac	46 a	42 a	34 a	66 a	47 a
Endura 8 oz/ac	49 a	46 a	34 a	67 a	49 a
Viature 16 fl oz/ac	42 a	42 a	33 a	67 a	46 a
CV:	10.2	7.2	13.7	7	8.5

Comparative fungicide efficacy: Management of white mold in soybeans

NDSU Carrington Research Extension Center; Michael Wunsch, Jesse Hafner, Suanne Kallis, Aaron Fauss, Thomas Miorino

ProPulse: fluopyram (FRAC 7) + prothioconazole (FRAC 3)

Viatude: picoxystrobin (FRAC 11) + prothioconazole (FRAC 3)

year	2024	2024	2024	COMBINED ANALYSIS 3 studies Viatude 16 fl oz/ac vs. ProPulse 6 fl oz/ac Two sequential applications of the same fungicide
location	Carrington	Carrington	Carrington	
funding	BASF	BASF	BASF	
variety	XO0602E	P064T04E	AG07XF2	
brand, maturity	Xitavo, 0.6	Pioneer, 0.6	Asgrow, 0.7	
row spacing	14 inches	14 inches	14 inches	
seeding rate	165,000 pls/ac	165,000 pls/ac	165,000 pls/ac	
previous crop	dry edible beans	dry edible beans	dry edible beans	
planting date	May 15	May 15	May 15	
disease assessment date	Oct. 1	Oct. 1-2	Oct. 2	
rows assessed for disease	1	1	1	
harvest date	Oct. 4	Oct. 4	Oct. 4	
dates, applications 1 and 2	July 23, July 30	July 23, July 30	July 23, July 30	
interval between applications	7 days	7 days	7 days	
growth stage, 1st applic.	100% R2	100% R2	100% R2	
canopy closure, 1st applic	90-95%	90-95%	90-95%	
nozzles, pressure, 1st applic.	AIXR110015, 60 psi	AIXR110015, 60 psi	AIXR110015, 60 psi	
droplet size, 1st applic.	medium	medium	medium	
canopy closure, 2nd applic.	99-100%	99-100%	99-100%	
nozzles, pressure, 2nd applic.	AIXR110015, 40 psi	AIXR110015, 40 psi	AIXR110015, 40 psi	
droplet size, 2nd applic.	coarse	coarse	coarse	
adjuvant	Masterlock, 6.4 fl oz/ac	Masterlock, 6.4 fl oz/ac	Masterlock, 6.4 fl oz/ac	
fungicide spray volume	15 gal/ac	15 gal/ac	15 gal/ac	
application method	hand-held boom	hand-held boom	hand-held boom	

White mold incidence (% of plants)

	White mold (% plants)			
Non-treated control	86 b	83 c	92 b	87 b
ProPulse 6 fl oz/ac	70 a	59 b	75 a	68 a
Viatude 16 fl oz/ac	69 a	46 a	72 a	62 a
CV:	9.3	16.1	8.5	7.5

White mold severity index (% of canopy)

	White mold (% canopy)			
Non-treated control	70 b	68 c	83 b	74 b
ProPulse 6 fl oz/ac	52 a	46 b	63 a	53 a
Viatude 16 fl oz/ac	52 a	31 a	56 a	47 a
CV:	13.9	18.2	10.7	8.5

Soybean yield (bu/ac; 13% moisture)

	Yield (bu/ac)			
Non-treated control	28 b	28 b	16 b	24 b
ProPulse 6 fl oz/ac	43 a	40 a	29 a	37 a
Viatude 16 fl oz/ac	42 a	42 a	33 a	39 a
CV:	10.2	7.2	13.7	4.2