### Delaro Complete 8 fl oz - single application

prothioconazo	ole (FRAC 3), 1.47 lb	s ai/gal; <b>trifloxystrol</b>	<b>bin</b> (FRAC 11), 1.29 lb	s ai/gal; <b>fluopyram</b> (	FRAC 7), 1.07 lb	s ai/gal
year	2020	2021	2021	2022	2023	
•	Carrington	Carrington	Carrington	Carrington	Carrington	
funding	•	BASF	Gowan	Bayer	Bayer	
_	DSR-0418	DSR-0807	DSR-0807	AG09Xf0	P06T04E	
brand, maturity	Dairyland, 0.4	Dairyland, 0.8	Dairyland, 0.8	Asgrow, 0.9	Pioneer, 0.6	
row spacing		21 inches	21 inches	14 inches	14 inches	
· · · ·	165,000 pls/ac	165,000 pls/ac	165,000 pls/ac	165,000 pls/ac	165,000 pls/ac	
previous crop	•	spring wheat	spring wheat	dry bean	chickpeas	
planting date	· -	May 12	May 12	May 27	May 24	
disease assessment date	-	Oct. 4	Oct. 4	Oct. 19	Oct. 12	
rows assessed for disease	1	1	1	1	1	
harvest date		Oct. 6	Oct. 7	Oct. 21	Oct. 17	
date fungicide was applied		July 26	July 26	July 23	July 22	The first fungicide
growth stage, 1st application	•	R3	R3	100% R2	100% R2	application was
canopy closure, 1st application		1	1	99-100%	95-100%	delayed until R3 when
nozzles, pressure, 1st application		AIXR110015, 50 psi	AIXR110015, 50 psi	AIXR110015, 50 psi	AIXR110015, 50	weather did not favor  or  psi white mold earlier in
						bloom.
droplet size, 1st application		coarse Masterlock 6.4 fl oz	coarse Induce 0.25%	coarse Induce 0.125% v/v	coarse	v/v
•	Induce 0.125% v/v				Induce, 0.125%	V/V
fungicide spray volume	-	15 gal/ac	15 gal/ac	15 gal/ac	15 gal/ac	
application method	nanu-neiu boom	hand-held boom	hand-held boom	hand-held boom	hand-held boom	
Sclerotinia incidence (% of plants) UNTREATED	<b>38</b> a	<b>34</b> a	<b>35</b> a	<b>74</b> b	<b>63</b> b	
DELARO COMPLETE 8 fl oz/ac	<b>42</b> a	<b>17</b> a	<b>20</b> a	<b>49</b> a	50 ab	<u></u>
PROPULSE 6 fl oz/ac	<b>45</b> a			<b>53</b> a	57 ab	<u></u>
PROPULSE 8 fl oz/ac	<b>31</b> a		00 -	48 a	51 ab	<u></u>
ENDURA 5.5 or 6.0 oz/ac	19.7	35.6	<b>20</b> a 20.3	<b>60</b> ab	<b>42</b> a 22.2	
		33.0	20.3	10.2	22.2	
Sclerotinia disease severity index		0.4		00.1	40.1	
UNTREATED	15 a	<b>24</b> a	23 a	<b>63</b> b	<b>43</b> b	
DELARO COMPLETE 8 fl oz/ac	17 a	<b>12</b> a	<b>12</b> a	<b>34</b> a	30 ab	
PROPULSE 6 fl oz/ac	<b>23</b> a			<b>36</b> a	<b>37</b> ab	
PROPULSE 8 fl oz/ac	<b>8</b> a			<b>33</b> a	<b>32</b> ab	
ENDURA 5.5 or 6.0 oz/ac	20.0	10.0	<b>12</b> a	41 a	<b>24</b> a	
CV:	23.2	19.8	26.9	24.6	31.2	
Yield (bu/ac)						
UNTREATED	<b>49</b> ab	<b>53</b> a	<b>56</b> a	<b>30</b> b	<b>47</b> b	<u></u>
DELARO COMPLETE 8 fl oz/ac	<b>48</b> b	<b>62</b> a	<b>61</b> a	<b>43</b> a	<b>54</b> a	<u></u>
PROPULSE 6 fl oz/ac	<b>49</b> ab			<b>39</b> a	<b>51</b> ab	
PROPULSE 8 fl oz/ac	<b>53</b> a			<b>42</b> a	<b>52</b> ab	
ENDURA 5.5 or 6.0 oz/ac			<b>62</b> a	<b>38</b> a	<b>56</b> a	
CV:	5.1	8.6	9	8.2	6.5	
Delaro Complete (8 fl oz/ac) vers	sus ProPulse (6 or	8 fl oz/ac)	COMBINED ANAL	YSIS, 3 studies		
	Sclerotinia incidend		nia DSI (%)	Yield		
UNTREATED	<b>58</b> a	. ,	<b>0</b> a	<b>42</b> a	Single fungi	cide application at R2 or
DELARO COMPLETE 8 fl oz/ac	<b>47</b> a		7 a	<b>48</b> a	Single lungi	R3
PROPULSE 6 fl oz/ac	<b>52</b> a		2 a	<b>47</b> a		
PROPULSE 8 fl oz/ac	<b>43</b> a		<b>4</b> a	<b>49</b> a		cide application was delayed weather did not favor white
CV:		26.		6.8		ld earlier in bloom.
Delaro Complete (8 fl oz/ac) vers	sus Endura (5.5 or	•	COMBINED ANAL	YSIS, 3 studies		
	Sclerotinia incidend	` '	nia DSI (%)	Yield	Single fungion	cide application at R2 or
UNTREATED	<b>57</b> b		<b>3</b> b	<b>44</b> b		R3
DELARO COMPLETE 8 fl oz/ac	<b>40</b> a	2	<b>5</b> a	<b>52</b> a		cide application was delayed
ENDURA 5.5 or 6.0 oz/ac	<b>41</b> a	2	<b>6</b> a	<b>52</b> a		n weather did not favor white ld earlier in bloom.
CV:	11.1	16.	1	5.1	mo	iu cariier iii DiOOIII.
Delaro Complete (8 fl oz/ac) vers	sus non-treated		COMBINED ANAL	YSIS, 5 studies		
, , , , , , , , , , , , , , , , , , ,	Sclerotinia incidend	ce (%) Sclerotin	nia DSI (%)	Yield		Single fungicide
UNTREATED	<b>49</b> a	- ` ´ <del></del>	3 a	<b>47</b> a	_	application at R2 or R3
DELARO COMPLETE 8 fl oz/ac	36 a		1 a 38%	<b>53</b> a	14%	11
CV:	11.1	reduction 16.		5.1	increase	
CV:	11.1	reduction 10.	reduction	J. I	iiioi case	

### Delaro Complete 8 fl oz - two sequential applications

prothioconazo	le (FRAC 3), 1,47 lbs	ai/gal: trifloxystrob	in (FRAC 11), 1,29 lb	s ai/gal: <b>fluopyram</b> (	FRAC 7), 1.07 lbs ai/g	val
year		2021	2022	2023	2023	,
•	Carrington	Carrington	Carrington	Carrington	Carrington	
funding	-	Gowan	BASF	Corteva	BASF	
· ·	DSR-0807	DSR-0807	AG09Xf0	P06T04E	21Xf07	
brand, maturity		Dairyland, 0.8	Asgrow, 0.9	Pioneer, 0.6	Peterson Farms, 0.7	
row spacing	-	21 inches	14 inches	14 inches	14 inches	
	165,000 pls/ac	165,000 pls/ac	165,000 pls/ac	165,000 pls/ac	165,000 pls/ac	
_	spring wheat	spring wheat	dry bean	chickpeas	chickpeas	
planting date	· -	May 12	May 27	May 24	May 24	
disease assessment date	•	Oct. 4	Oct. 19	Oct. 12	Oct. 12	
rows assessed for disease		1	1	1	1	
harvest date		Oct. 7	Oct. 21	Oct. 17	Oct. 17	
dates, applications 1 and 2		July 26, Aug. 6	July 23, Aug. 1	July 22, Aug. 2	July 22, Aug. 2	The first functions
interval between applications	-	11 days	9 days	11 days	11 days	The first fungicide application was
growth stage, 1st application		R3	100% R2	100% R2	100% R2	delayed until R3 wher
		100%	99-100%	95-100%	98-100%	weather did not favor white mold earlier in
canopy closure, 1st application nozzles, pressure, 1st application		AIXR110015, 50 psi	AIXR110015, 50 psi	AIXR110015, 50 psi	AIXR110015, 50 psi	bloom.
droplet size, 1st application	•	coarse	coarse	coarse	coarse	
			100%	100%	100%	
canopy closure, 2nd application		100%				
nozzles, pressure, 2nd application		AIXR110015, 50 psi	AIXR110015, 50 psi	AIXR110015, 40 psi	AIXR110015, 40 psi	
droplet size, 2nd application		coarse	coarse	coarse	Coarse	2
•	Masterlock 6.4 fl oz/ac				Masterlock, 6.4 fl oz/a	·
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	
Sclerotinia incidence (% of plants	<b>42</b> a	<b>35</b> a	<b>82</b> b	<b>50</b> b	<b>54</b> b	_
Non-treated control			<b>53</b> a	<b>30</b> D		_
ENDURA 6 oz/ac	<b>36</b> a	<b>20</b> a	<b>49</b> a		33 ab 35 ab	-
PROPULSE 6 fl oz/ac	<b>21</b> a	<b>20</b> a	49 a 41 a	<b>25</b> a	38 ab	_
DELARO COMPLETE 8 fl oz/ac	ZI d	<b>20</b> a	41 a	17 a	28 a	-
ENDURA 8 oz/ac	38.8	20.3	14.4	33.7	35.6	-
Sclerotinia disease severity index		20.0	11.1	00.7	00.0	
Non-treated control	<b>27</b> a	<b>23</b> a	<b>70</b> b	<b>31</b> b	<b>31</b> b	_
ENDURA 6 oz/ac	19 a	12 a	<b>40</b> a	31.0	18 ab	-
	i <b>y</b> a	1 <b>2</b> a	<b>35</b> a		18 ab	-
PROPULSE 6 fl oz/ac	<b>9</b> a	<b>12</b> a	31 a	<b>14</b> a	20 ab	-
DELARO COMPLETE 8 fl oz/ac	<b>3</b> a	1 <b>2</b> a	Jia		<b>20</b> ab	
ENDURA 8 oz/ac				7 2	11 2	_
	25	26.9	17 5	<b>7</b> a	<b>11</b> a	<del>-</del>
	25	26.9	17.5	<b>7</b> a 49.2	<b>11</b> a 47.4	
Yield (bu/ac)				49.2	47.4	
Yield (bu/ac) Non-treated control	<b>51</b> a	<b>56</b> a	<b>25</b> b		47.4 <b>50</b> a	
Yield (bu/ac) Non-treated control ENDURA 6 oz/ac			25 b 42 a	49.2	47.4 <b>50</b> a <b>50</b> a	- _ -
Yield (bu/ac)  Non-treated control  ENDURA 6 oz/ac  PROPULSE 6 fl oz/ac	<b>51</b> a <b>55</b> a	56 a 62 a	25 b 42 a 43 a	49.2 <b>56</b> b	47.4 50 a 50 a 56 a	- 
Yield (bu/ac)  Non-treated control  ENDURA 6 oz/ac  PROPULSE 6 fl oz/ac  DELARO COMPLETE 8 fl oz/ac	<b>51</b> a	<b>56</b> a	25 b 42 a	49.2 <b>56</b> b <b>59</b> ab	50 a 50 a 50 a 56 a 53 a	- _ - - -
Yield (bu/ac)  Non-treated control  ENDURA 6 oz/ac  PROPULSE 6 fl oz/ac  DELARO COMPLETE 8 fl oz/ac  ENDURA 8 oz/ac	51 a 55 a 60 a	56 a 62 a 61 a	25 b 42 a 43 a 47 a	49.2 <b>56</b> b <b>59</b> ab <b>63</b> a	50 a 50 a 50 a 56 a 53 a 62 a	- - - - -
Yield (bu/ac)  Non-treated control  ENDURA 6 oz/ac  PROPULSE 6 fl oz/ac  DELARO COMPLETE 8 fl oz/ac	51 a 55 a 60 a	56 a 62 a	25 b 42 a 43 a	49.2 <b>56</b> b <b>59</b> ab	50 a 50 a 50 a 56 a 53 a	- - - - -
Yield (bu/ac)  Non-treated control  ENDURA 6 oz/ac  PROPULSE 6 fl oz/ac  DELARO COMPLETE 8 fl oz/ac  ENDURA 8 oz/ac	51 a 55 a 60 a 13 sus Endura (6.0 oz/	56 a 62 a 61 a 9	25 b 42 a 43 a 47 a 10.7 COMBINED ANAL	49.2 <b>56</b> b <b>59</b> ab <b>63</b> a 6.8	50 a 50 a 50 a 56 a 53 a 62 a	-
Yield (bu/ac) Non-treated control ENDURA 6 oz/ac PROPULSE 6 fl oz/ac DELARO COMPLETE 8 fl oz/ac ENDURA 8 oz/ac  CV:	51 a 55 a 60 a 13 sus Endura (6.0 oz/	56 a 62 a 61 a 9	25 b 42 a 43 a 47 a	49.2  56 b  59 ab  63 a  6.8  (SIS, 3 studies  Yield	50 a 50 a 50 a 56 a 53 a 62 a 15	
Yield (bu/ac) Non-treated control ENDURA 6 oz/ac PROPULSE 6 fl oz/ac DELARO COMPLETE 8 fl oz/ac ENDURA 8 oz/ac  CV:	51 a 55 a 60 a 13 sus Endura (6.0 oz/	56 a 62 a 61 a 9 ac) e (%) Sclerotini	25 b 42 a 43 a 47 a 10.7 COMBINED ANALY	49.2  56 b  59 ab  63 a  6.8  YSIS, 3 studies  Yield  46 a	50 a 50 a 50 a 56 a 53 a 62 a 15	pplications: R2 or
Yield (bu/ac) Non-treated control ENDURA 6 oz/ac PROPULSE 6 fl oz/ac DELARO COMPLETE 8 fl oz/ac ENDURA 8 oz/ac  CV: Delaro Complete (8 fl oz/ac) ver	51 a 55 a 60 a 13 sus Endura (6.0 oz/	56 a 62 a 61 a 9 ac) e (%) Sclerotini	25 b 42 a 43 a 47 a 10.7 COMBINED ANALY	49.2  56 b  59 ab  63 a  6.8  (SIS, 3 studies  Yield	47.4  50 a  50 a  56 a  53 a  62 a  15  Two sequential a  R3 + 9-11	
Yield (bu/ac) Non-treated control ENDURA 6 oz/ac PROPULSE 6 fl oz/ac DELARO COMPLETE 8 fl oz/ac ENDURA 8 oz/ac  CV: Delaro Complete (8 fl oz/ac) ver	51 a 55 a 60 a 13 sus Endura (6.0 oz/	56 a 62 a 61 a 9 ac) e (%) Sclerotini 38	25 b 42 a 43 a 47 a 10.7 COMBINED ANALY	49.2  56 b  59 ab  63 a  6.8  YSIS, 3 studies  Yield  46 a	50 a 50 a 50 a 56 a 53 a 62 a 15  Two sequential a R3 + 9-11  The first fungicide ap until R3 when weath	days later eplication was delayed her did not favor white
Yield (bu/ac) Non-treated control ENDURA 6 oz/ac PROPULSE 6 fl oz/ac DELARO COMPLETE 8 fl oz/ac ENDURA 8 oz/ac CV: Delaro Complete (8 fl oz/ac) ver UNTREATED ENDURA 6 oz/ac	51 a 55 a 60 a 13 sus Endura (6.0 ozla Sclerotinia incidenca 53 b 36 a 30 a	56 a 62 a 61 a 9 ac) e (%) Sclerotini 38	25 b 42 a 43 a 47 a  10.7  COMBINED ANALY ia DSI (%) b ab	49.2  56 b  59 ab  63 a  6.8  YSIS, 3 studies  Yield  46 a  52 a	50 a 50 a 50 a 56 a 53 a 62 a 15  Two sequential a R3 + 9-11  The first fungicide ap until R3 when weath	days later pplication was delayed
Yield (bu/ac)  Non-treated control  ENDURA 6 oz/ac  PROPULSE 6 fl oz/ac  DELARO COMPLETE 8 fl oz/ac  ENDURA 8 oz/ac  CV:  Delaro Complete (8 fl oz/ac) ver  UNTREATED  ENDURA 6 oz/ac  DELARO COMPLETE 8 fl oz/ac  CV:	51 a 55 a 60 a 13 sus Endura (6.0 oz/ Sclerotinia incidenc 53 b 36 a 30 a 19.1	56 a 62 a 61 a 9 ac) e (%) Sclerotini 38 22	25 b 42 a 43 a 47 a 10.7 COMBINED ANALY ia DSI (%) is b	49.2  56 b  59 ab 63 a 6.8  (SIS, 3 studies Yield  46 a 52 a 55 a 9	50 a 50 a 50 a 56 a 53 a 62 a 15  Two sequential a R3 + 9-11  The first fungicide ap until R3 when weath	days later  pplication was delayed her did not favor white
Yield (bu/ac)  Non-treated control  ENDURA 6 oz/ac  PROPULSE 6 fl oz/ac  DELARO COMPLETE 8 fl oz/ac  ENDURA 8 oz/ac  CV:  Delaro Complete (8 fl oz/ac) veri  UNTREATED  ENDURA 6 oz/ac  DELARO COMPLETE 8 fl oz/ac	51 a 55 a 60 a 13 sus Endura (6.0 oz/ Sclerotinia incidenc 53 b 36 a 30 a 19.1 sus non-treated	56 a 62 a 61 a 9 ac) e (%) Sclerotini 38 22 18 28.3	25 b 42 a 43 a 47 a  10.7  COMBINED ANALY is DSI (%) b ab is a  COMBINED ANALY	49.2  56 b  59 ab  63 a 6.8  (SIS, 3 studies  Yield  46 a 52 a 55 a 9	47.4  50 a  50 a  56 a  53 a  62 a  15  Two sequential a  R3 + 9-11  The first fungicide apuntil R3 when weath mold earlier	days later application was delayed aper did not favor white er in bloom.
Yield (bu/ac) Non-treated control ENDURA 6 oz/ac PROPULSE 6 fl oz/ac DELARO COMPLETE 8 fl oz/ac ENDURA 8 oz/ac  CV: Delaro Complete (8 fl oz/ac) vers  UNTREATED ENDURA 6 oz/ac DELARO COMPLETE 8 fl oz/ac  CV: Delaro Complete (8 fl oz/ac) vers	51 a 55 a 60 a 13 sus Endura (6.0 oz/ Sclerotinia incidenc 53 b 36 a 30 a 19.1 sus non-treated Sclerotinia incidenc	56 a 62 a 61 a 9 ac) e (%) Sclerotini 28.3	25 b 42 a 43 a 47 a  10.7  COMBINED ANALY a DSI (%) b ab a a  COMBINED ANALY a DSI (%)	49.2  56 b  59 ab 63 a 6.8  YSIS, 3 studies  Yield  46 a 52 a 55 a 9  YSIS, 5 studies  Yield	47.4  50 a  50 a  56 a  53 a  62 a  15  Two sequential a  R3 + 9-11  The first fungicide ap  until R3 when weath mold earlie	days later  pplication was delayed are did not favor white er in bloom.
Yield (bu/ac) Non-treated control ENDURA 6 oz/ac PROPULSE 6 fl oz/ac DELARO COMPLETE 8 fl oz/ac ENDURA 8 oz/ac  CV: Delaro Complete (8 fl oz/ac) veri UNTREATED ENDURA 6 oz/ac DELARO COMPLETE 8 fl oz/ac  CV: Delaro Complete (8 fl oz/ac) veri UNTREATED UNTREATED UNTREATED	51 a 55 a 60 a 13 sus Endura (6.0 oz/ Sclerotinia incidenc 53 b 36 a 30 a 19.1 sus non-treated Sclerotinia incidenc 53 b	56 a 62 a 61 a 9 ac) e (%) Sclerotini 28.3 e (%) Sclerotini 37	25 b 42 a 43 a 47 a  10.7  COMBINED ANALY a DSI (%) b ab a a  COMBINED ANALY a DSI (%) b b	49.2  56 b  59 ab 63 a 6.8  YSIS, 3 studies  Yield  46 a 52 a 55 a 9  YSIS, 5 studies  Yield  48 a	50 a 50 a 50 a 56 a 53 a 62 a 15  Two sequential a R3 + 9-11 The first fungicide ap until R3 when weath mold earlie	days later  pplication was delayed ager did not favor white er in bloom.  yo sequential ons: R2 or R3 + 9
Yield (bu/ac) Non-treated control ENDURA 6 oz/ac PROPULSE 6 fl oz/ac DELARO COMPLETE 8 fl oz/ac ENDURA 8 oz/ac  CV: Delaro Complete (8 fl oz/ac) vers  UNTREATED ENDURA 6 oz/ac DELARO COMPLETE 8 fl oz/ac  CV: Delaro Complete (8 fl oz/ac) vers	51 a 55 a 60 a 13 sus Endura (6.0 oz/ Sclerotinia incidenc 53 b 36 a 30 a 19.1 sus non-treated Sclerotinia incidenc 53 b	56 a 62 a 61 a 9 ac) e (%) Sclerotini 28.3 e (%) Sclerotini 37	25 b 42 a 43 a 47 a  10.7  COMBINED ANALY ia DSI (%) b a ab c a  COMBINED ANALY ia DSI (%) b a b a a  5  COMBINED ANALY ia DSI (%) b a a  5  COMBINED ANALY ia DSI (%) b a a 5  COMBINED ANALY ia DSI (%) b a a 5  COMBINED ANALY ia DSI (%) b a a 5  COMBINED ANALY ia DSI (%) b a a 5  COMBINED ANALY ia DSI (%)	49.2  56 b  59 ab 63 a 6.8  YSIS, 3 studies  Yield  46 a 52 a 55 a 9  YSIS, 5 studies  Yield	50 a 50 a 50 a 56 a 53 a 62 a 15  Two sequential a R3 + 9-11 The first fungicide ap until R3 when weath mold earlie  Two applications	oplication was delayed her did not favor white er in bloom.

### Miravis Neo 13.7 or 20.8 fl oz - single fungicide application

	wiiravis neo	13.7 or 20.8	8 fi oz - singie fu	ngicide appi	lication		
pydiflume	etofen (FRAC 7), 0.63 lbs	ai/gal; azoxystro	<b>bin</b> (FRAC 11), 0.83 lbs a	i/gal; <b>propiconazo</b>	ole (FRAC 3), 1.	04 lbs ai/g	gal
year	2019	2020	2020	2021	2021		
location	Carrington	Carrington	Carrington	Carrington	Carrington		
funding	Syngenta	Syngenta	BASF	Syngenta	Gowan		
variety	17X04N	DSR-0418	DSR-0418	DSR-0807	DSR-0807		
brand, maturity	Peterson Farms, 0.7	Dairyland, 0.4	Dairyland, 0.4	Dairyland, 0.8	Dairyland, (	0.8	
row spacing	21 inches	21 inches	21 inches	21 inches	21 inches		
seeding rate	165,000 pls/ac	165,000 pls/ac	165,000 pls/ac	165,000 pls/ac	165,000 pls	/ac	
previous crop	lentils	spring wheat	spring wheat	spring wheat	spring whea		
planting date	May 9	May 18	May 18	May 12	May 12		
disease assessment date	Oct. 30	Oct. 16	Oct. 15	Oct. 4	Oct. 4		
rows assessed for disease	1	1	1	1	1		
harvest date	Oct. 31, Nov. 2	Oct. 19	Oct. 16	Oct. 6	Oct. 7		
date fungicide was applied	July 28	July 17	July 14	July 22	July 26		The first fungicide
growth stage, 1st applic.	100% R3	100% R2	100% R2	100% R2	R3		application was
canopy closure, 1st applic	90-100% (ave. 97%)	75-90%	65-95%	95-100%	1		delayed until R3 when
nozzles, pressure, 1st applic.	AIXR110015, 50 psi	AIXR110015, 60 p		XR11010, 30 psi	AIXR11001	5 50 psi	weather did not favor white mold earlier in
droplet size, 1st applic.	coarse	medium	medium	coarse	coarse	_, 00 pai	bloom.
adjuvant	none	Induce 0.25% v/v	none	NIS 0.25% v/v	Induce 0.25	5%	
fungicide spray volume	15 gal/ac	15 gal/ac	15 gal/ac	15 gal/ac	15 gal/ac		
application method	hand-held boom	hand-held boom	hand-held boom	tractor, 6.5 mph	hand-held b	noom	
		nanu-nelu boom	Haliu-Helu Doolii	uacioi, olo mpri	nanu-neid L	,00111	
Sclerotinia incidence (% of pl	ants) 78 a	48 a	26 b	24 a	35	2	_
UNTREATED  MIDAVIS NEO 13 7 fl oz/20	78 a 72 a	40 a	20 b	24 d	23		-
MIRAVIS NEO 13.7 fl oz/ac		52 a	20 D	25 a	23	а	_
MIRAVIS NEO 20.8 fl oz/ac ENDURA 5.5 or 6.0 oz/ac	74 a		2 -		20		_
ENDORA 5.5 OF 0.0 02/ac	CV: 10.9	38 a 26.3	3 a 30.7	21 a 30.5	20.3	а	_
0-1		20.5	30.1	30.3	20.5		
Sclerotinia severity index (%		24.5	10 h	16.5	00		_
UNTREATED	58 a	21 a	10 b	16 a	23		=
MIRAVIS NEO 13.7 fl oz/ac	52 a	04 -	8 ab	44 -	14	а	=
MIRAVIS NEO 20.8 fl oz/ac ENDURA 5.5 or 6.0 oz/ac	48 a	21 a	1.0	14 a	40		=
LINDONA 3.3 OF 0.0 02/ac	CV: 16.1	13 a 34.6	1 a 39.5	12 a 32.8	12 26.9	а	=
V: -1-I	CV: 16.1	34.0	39.3	32.0	20.9		
Yield	25.0	22.5	45.0	EE a	FC		_
UNTREATED	25 a	33 a	45 a	55 a	56		=
MIRAVIS NEO 13.7 fl oz/ac	31 a	24.5	46 a	F0 -	64	а	=
MIRAVIS NEO 20.8 fl oz/ac ENDURA 5.5 or 6.0 oz/ac	31 a	34 a	40	58 a			-
ENDURA 5.5 01 6.0 02/ac	CV· 19.4	36 a	49 a	58 a 4.2	62 9	а	_
	CV: 19.4	7.2	15.1	4.2	9		
Miravis Neo (13.7 fl oz/ac) v	ersus Endura (6.0 oz/a	c)				Sir	ngle fungicide
COMBINED ANALYSIS, 2 s	tudies Sclerotir	nia incidence (%)	Sclerotinia DSI (%)	Yield			ation at R2 or R3
Non-treated control	3	<b>0</b> a	<b>17</b> a		<b>51</b> a		ungicide application was
MIRAVIS NEO 13.7 fl oz/ac	2	<b>1</b> a	<b>11</b> a		<b>55</b> a		ntil R3 when weather did or white mold earlier in
ENDURA 6 oz/ac	1:	<b>2</b> a	<b>7</b> a		<b>55</b> a		bloom.
	CV: 24.	1	23.5		5.1		
Miravis Neo (13.7 fl oz/ac) v	ersus non-treated					Sir	ngle fungicide
COMBINED ANALYSIS, 3 s	tudies Sclerotir	nia incidence (%)	Sclerotinia DSI (%)	Yield		applica	ation at R2 or R3
UNTREATED	<b>46</b> a	_	<b>31</b> a	<b>42</b> a			ungicide application was
MIRAVIS NEO 13.7 fl oz/ac	<b>38</b> a	_17%	24 a 21%	<b>47</b> a	12%		ntil R3 when weather did or white mold earlier in
	CV: 5.6	reduction	9.6 reduction	6.2	increase		bloom.
Miravis Neo (20.8 fl oz/ac) v	versus Endura (5.5 oz/a	c)					ngle fungicide
COMBINED ANALYSIS, 2 s	tudies Sclerotir	nia incidence (%)	Sclerotinia DSI (%)	Yield			ation at R2 or R3
Non-treated control	3	<b>6</b> a	<b>18</b> a		<b>44</b> a		ungicide application was
MIRAVIS NEO 20.8 fl oz/ac	3	<b>8</b> a	<b>17</b> a		<b>46</b> a		ntil R3 when weather did or white mold earlier in
ENDURA 5.5 oz/ac	2	<b>9</b> a	<b>13</b> a		<b>47</b> a		bloom.
	CV: 9.	6	13.9		2.1		
Miravis Neo (20.8 fl oz/ac) v	ersus non-treated					Sir	ngle fungicide
COMBINED ANALYSIS, 3 s	tudies Sclerotir	nia incidence (%)	Sclerotinia DSI (%)	Yield			ation at R2 or R3
UNTREATED	<b>50</b> a		<b>32</b> a	<b>37</b> a			ungicide application was
MIRAVIS NEO 20.8 fl oz/ac	<b>50</b> a	0%	28 a 13%	<b>41</b> a	10%		ntil R3 when weather did or white mold earlier in
	CV: 5.7	_	13.4 reduction	4.7	increase	not lavo	bloom.

#### Miravis Neo 13.7 or 20.8 fl oz - two sequential fungicide applications

pydiflur	netofen (FRAC 7)	, 0.63 lbs ai/gal; <b>a</b>	zoxystrobin (FRAC 11),	0.83 lbs ai/gal; pro	piconazole (FF	AC 3), 1.04 lbs ai/gal	
year	2019	2020	2020	2021	2021	2022	
location Ca	arrington	Carrington	Carrington	Carrington	Carrington	Carrington	
funding Sy	ngenta	Syngenta	ADAMA	Syngenta	Gowan	BASF	
variety 17	_	DSR-0418	DSR-0418	DSR-0807	DSR-0807	AG09Xf0	
brand, maturity Pe		Dairyland, 0.4	Dairyland, 0.4	Dairyland, 0.8	Dairyland, 0.8	Asgrow, 0.9	
row spacing 21	·	21 inches	21 inches	21 inches	21 inches	14 inches	
seeding rate 16		165,000 pls/ac	165,000 pls/ac	165,000 pls/ac	165,000 pls/a		
previous crop ler	•	spring wheat	spring wheat	spring wheat	spring wheat	dry bean	
planting date Ma		May 18	May 18	May 12	May 12	May 27	
			•				
disease assessment date Od	ii. 30	Oct. 16	Oct. 15	Oct. 4	Oct. 4	Oct. 19	
rows assessed for disease 1		1	1	1	1	1	
harvest date Od		Oct. 19	Oct. 16	Oct. 6	Oct. 7	Oct. 21	
dates, applications 1 and 2 Ju	-	July 17, 28	July 14, 28	July 22, Aug. 2	July 26, Aug.		The first fu
interval between applications 11	days	11 days	14 days	11 days	11 days	9 days	applicatio delayed until
growth stage, 1st application 10	0% R3	100% R2	100% R2	100% R2	R3		weather did
canopy closure, 1st application 90	-100% (ave. 97%)	75-90%	65-95%	95-100%	100%	99-100%	white mold
nozzles, pressure, 1st application Al.	XR110015, 50 psi	AIXR110015, 60 p	si AIXR110015, 60 psi	XR11010, 30 psi	AIXR110015,	50 psi AIXR110015, 50 psi	bloor
droplet size, 1st application co	arse	medium	medium	coarse	coarse	coarse	
canopy closure, 2nd application 10	0%	100%	100%	100%	100%	100%	
nozzles, pressure, 2nd application Al.	XR110015, 50 psi	AIXR110015, 40 p	si AIXR110015, 40 psi	XR11010, 30 psi	AIXR110015,	50 psi AIXR110015, 50 psi	
droplet size, 2nd application co	arse	coarse	coarse	coarse	coarse	coarse	
adjuvant no		Induce 0.25% v/v	none	Activator 90 NIS 0.2	25% Induce 0.25%	, some tn Masterlock, 6.4 fl oz/ac	
fungicide spray volume 15	gal/ac	15 gal/ac	15 gal/ac	15 gal/ac	15 gal/ac	15 gal/ac	
application method ha	nd-held boom	hand-held boom	hand-held boom	tractor, 6.5 mph	hand-held bo		
Sclerotinia incidence (% of plants)							
Non-treated control	78 b	48 a	34 a	24 a	35 a	82 b	
MIRAVIS NEO 13.7 fl oz/ac	63 a	-10 a		2+ α	23 a		
MIRAVIS NEO 13.7 II 02/ac	69 ab	38 a	30 a	22 a	25 8		
	09 ab	30 a	30 a	22 a	20. a	53 a	
ENDURA 6 oz/ac	10.9	26.3	30.3	30.5	20 a 20.3	14.4	
		20.3	30.3	30.3	20.3	14.4	
Sclerotinia severity index (% of cano				- 10			
Non-treated control	58 b	21 a	13 a	16 a	23 a		
MIRAVIS NEO 13.7 fl oz/ac	43 a				14 a	56 ab	
MIRAVIS NEO 20.8 fl oz/ac	48 ab	12 a	12 a	13 a			
ENDURA 6 oz/ac					12 a		
CV:	16.1	34.6	39.9	32.8	26.9	17.5	
Soybean yield							
Non-treated control	25 a	33 a	42 a	55 b	56 a	25 b	
MIRAVIS NEO 13.7 fl oz/ac	35 a				64 a	34 a	
MIRAVIS NEO 20.8 fl oz/ac	30 a	34 a	39 a	60 a			
ENDURA 6 oz/ac					62 a	42 a	
CV:	19.4	7.2	11	4.2	9	10.7	
Minordo Nos (42.7 Stanton)	'm d (C. C 1	<b>.</b>					
Miravis Neo (13.7 fl oz/ac) versus E	•	•	0.1 50.6			Two fungicide applications:	
COMBINED ANALYSIS, 2 studies		ia incidence (%)	Sclerotinia DSI (%)	Yield		R3 + 9-14 days later	
Non-treated control	58	3 a	<b>47</b> a		41 a	The first fungicide application was	
	VIS NEO 13.7 fl oz/ac <b>45</b> a		<b>35</b> a	•	<b>49</b> a	until R3 when weather did not fav mold earlier in bloom.	or white
MIRAVIS NEO 13.7 fl oz/ac						mola cariler in biooffi.	
MIRAVIS NEO 13.7 fl oz/ac ENDURA 6 oz/ac		7 a	<b>26</b> a		<b>52</b> a		
MIRAVIS NEO 13.7 fl oz/ac		<b>7</b> a			<b>52</b> a 3.7		
MIRAVIS NEO 13.7 fl oz/ac ENDURA 6 oz/ac	37 12.	<b>7</b> a	<b>26</b> a		3.7	Two fungicide applications:	R2 or
MIRAVIS NEO 13.7 fl oz/ac ENDURA 6 oz/ac CV: Miravis Neo (13.7 fl oz/ac) versus n	12. on-treated	<b>7</b> a	<b>26</b> a	1	3.7	Two fungicide applications: R3 + 9-14 days later	
MIRAVIS NEO 13.7 fl oz/ac  ENDURA 6 oz/ac  CV:  Miravis Neo (13.7 fl oz/ac) versus n  COMBINED ANALYSIS, 3 studies	12. on-treated	<b>7</b> a	<b>26</b> a 19.8	1	3.7	R3 + 9-14 days later	
MIRAVIS NEO 13.7 fl oz/ac  ENDURA 6 oz/ac  CV:  Miravis Neo (13.7 fl oz/ac) versus n  COMBINED ANALYSIS, 3 studies  UNTREATED	37 12. on-treated Sclerotin	7 a 3 ia incidence (%)	26 a 19.8  Sclerotinia DSI (%) 51 a	Yield	3.7	•	delayed
MIRAVIS NEO 13.7 fl oz/ac  ENDURA 6 oz/ac  CV:  Miravis Neo (13.7 fl oz/ac) versus n  COMBINED ANALYSIS, 3 studies  UNTREATED	37 12. con-treated Sclerotin 65 a	<b>7</b> a	26 a 19.8 Sclerotinia DSI (%) 51 a	Yield 35 a	3.7	R3 + 9-14 days later  The first fungicide application was	delayed
MIRAVIS NEO 13.7 fl oz/ac  ENDURA 6 oz/ac  CV:  Miravis Neo (13.7 fl oz/ac) versus n  COMBINED ANALYSIS, 3 studies  UNTREATED  MIRAVIS NEO 13.7 fl oz/ac  CV:	3: 12. 15. 16. 17. 18. 19. 19. 19. 19. 19. 19. 19. 19. 19. 19	7 a 3 ia incidence (%)	26 a 19.8  Sclerotinia DSI (%) 51 a 37 a 26%	Yield  35 a  44 a	26% increase	R3 + 9-14 days later The first fungicide application was until R3 when weather did not fav mold earlier in bloom.	delayed or white
MIRAVIS NEO 13.7 fl oz/ac  ENDURA 6 oz/ac  CV:  Miravis Neo (13.7 fl oz/ac) versus n  COMBINED ANALYSIS, 3 studies  UNTREATED  MIRAVIS NEO 13.7 fl oz/ac  CV:  Miravis Neo (20.8 fl oz/ac) versus n	3: 12. 00n-treated Sclerotin 65 a 51 a 2 00n-treated	7 a 3 ia incidence (%) 21% reduction	26 a 19.8  Sclerotinia DSI (%) 51 a 37 a 26% reduction	Yield  35 a  44 a  1.6	26% increase	R3 + 9-14 days later The first fungicide application was until R3 when weather did not fav mold earlier in bloom.  Two fungicide applications:	delayed or white
MIRAVIS NEO 13.7 fl oz/ac  ENDURA 6 oz/ac  CV:  Miravis Neo (13.7 fl oz/ac) versus n  COMBINED ANALYSIS, 3 studies  UNTREATED  MIRAVIS NEO 13.7 fl oz/ac  CV:  Miravis Neo (20.8 fl oz/ac) versus n  COMBINED ANALYSIS, 4 studies	33 12. con-treated Sclerotin 65 a 51 a 2 con-treated Sclerotin	7 a 3 ia incidence (%)	26 a 19.8  Sclerotinia DSI (%) 51 a 37 a 26% 5 reduction  Sclerotinia DSI (%)	Yield  35 a  44 a  1.6  Yield	26% increase	R3 + 9-14 days later The first fungicide application was until R3 when weather did not fav mold earlier in bloom.  Two fungicide applications: R3 + 9-14 days later	delayed for white
MIRAVIS NEO 13.7 fl oz/ac  ENDURA 6 oz/ac  CV:  Miravis Neo (13.7 fl oz/ac) versus n  COMBINED ANALYSIS, 3 studies  UNTREATED  MIRAVIS NEO 13.7 fl oz/ac  CV:  Miravis Neo (20.8 fl oz/ac) versus n	3: 12. 00n-treated Sclerotin 65 a 51 a 2 00n-treated	7 a 3 ia incidence (%) 21% reduction	26 a 19.8  Sclerotinia DSI (%) 51 a 37 a 26% reduction	Yield  35 a  44 a  1.6	26% increase	R3 + 9-14 days later The first fungicide application was until R3 when weather did not fav mold earlier in bloom.  Two fungicide applications:	delayed or white

# ProPulse 6 fl oz - single application

			ic application		
pro	othioconazole (FRAC		uopyram (FRAC 7), 1.		
yea	r 2020	2022	2023	2023	
location	n Carrington	Carrington	Carrington	Carrington	
funding	g Bayer	Bayer	ND Soybean Council	Bayer	
variet	y DSR-0418	AG09Xf0	21Xf07	P06T04E	
brand, maturit	y Dairyland, 0.4	Asgrow, 0.9	Peterson Farms, 0.7	Pioneer, 0.6	
row spacing	g 21 inches	14 inches	14 inches	14 inches	
seeding rate	e 165,000 pls/ac	165,000 pls/ac	165,000 pls/ac	165,000 pls/ac	
previous crop	p spring wheat	dry bean	chickpeas	chickpeas	
planting date	e May 18	May 27	May 24-25	May 24	
disease assessment date	e Oct. 16	Oct. 19	Oct. 12-13	Oct. 12	
rows assessed for disease	e 1	1	1	1	
harvest date	e Oct. 19	Oct. 21	Oct. 17	Oct. 17	
date fungicide was applied	d July 17	July 23	July 22	July 22	
growth stage, 1st application	n 100% R2	100% R2	100% R2	100% R2	
canopy closure, 1st application	n 75-90%	99-100%	98-100%	95-100%	
nozzles, pressure, 1st application	n AIXR110015, 60 psi	AIXR110015, 50 psi	AIXR110015, 50 psi	AIXR110015, 50 psi	
droplet size, 1st application	n medium	coarse	coarse	coarse	
adjuvan	t Induce 0.125% v/v	Induce 0.125% v/v	none	Induce, 0.125% v/v	
fungicide spray volume	e 15 gal/ac	15 gal/ac	15 gal/ac	15 gal/ac	
application method	d hand-held boom	hand-held boom	hand-held boom	hand-held boom	
Sclerotinia incidence (% of plants	)				
UNTREATED	38 a	74 b	62 a	63 b	
PROPULSE 6 fl oz/ac	45 a	53 a	61 a	57 ab	=
PROPULSE 8 fl oz/ac	31 a	48 a		51 ab	-
ENDURA 5.5 oz/ac		60 ab		42 a	-
CV	': 19.7	18.2	26.4	22.2	-
Sclerotinia severity index (% of ca	anopy)				
UNTREATED	15 a	63 b	42 a	43 b	•
PROPULSE 6 fl oz/ac	23 a	36 a	41 a	37 a	-
PROPULSE 8 fl oz/ac	8 a	33 a		32 a	-
ENDURA 5.5 oz/ac		41 a		24 a	_
CV	': 23.2	24.6	35.9	31.2	-
Yield					
UNTREATED	49 a	30 b	44 a	47 b	-
PROPULSE 6 fl oz/ac	49 a	39 a	48 a	51 ab	-
PROPULSE 8 fl oz/ac	53 a	42 a		52 ab	-
ENDURA 5.5 oz/ac		38 a		56 a	-
CV	': 5.1	8.2	12.5	6.5	-
ProPulse (6 fl oz/ac) versus End	dura (5,5 oz/ac)		COMBINED ANALY	SIS, 2 studies	
and (a in deliad) forodo Ent	Sclerotinia incidend	e (%) Sclerotin	ia DSI (%)	Yield	Cinala formatal
UNTREATED	<b>69</b> a	, ,	3 a	<b>38</b> a	Single fungicide application at
PROPULSE 6 fl oz/ac	55 a		<del>)</del> а	<b>45</b> a	100% R2
ENDURA 5.5 oz/ac	51 a		<u>за</u> В а	47 a	130 /0 112
CV		19.8		5.1	
		19.0			
ProPulse (6 fl oz/ac) versus Pro	, ,		COMBINED ANALY	•	
	Sclerotinia incidend	` '	ia DSI (%)	Yield	Single fungicide
UNTREATED	<b>58</b> a		) a	<b>42</b> a	application at
PROPULSE 6 fl oz/ac	<b>52</b> a		2 a	<b>47</b> a	100% R2
PROPULSE 8 fl oz/ac	<b>43</b> a		<b>!</b> a	<b>49</b> a	
CV	': 14.3	28.3	3	6.3	
ProPulse (6 fl oz/ac) versus nor	n-treated	COMBIN	IED ANALYSIS, 4 stu	dies	Single applic. at
	Sclerotinia incidend		ia DSI (%)	Yield	100% R2
UNTREATED	<b>59</b> a	- ` · · ———	I a	<b>42</b> a	
PROPULSE 6 fl oz/ac	<b>54</b> a	_	16%	<b>47</b> a	11%
CV		reduction 27.9		6.4	increase
CV	. 17.0	. 50000011 27.3	, reduction	J. <del>T</del>	

# ProPulse 6 fl oz - two sequential applications

prot	:hioconazole (FRAC :	3), 1.67 lbs ai/gal; <b>flu</b>	opyram (FRAC 7), 1.	67 lbs ai/gal	
year	2022	2023	2023		
location	Carrington	Carrington	Carrington		
funding	BASF	ND Soybean Council	BASF		
variety	AG09Xf0	21Xf07	21Xf07		
brand, maturity	Asgrow, 0.9	Peterson Farms, 0.7	Peterson Farms, 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 bean	chickpeas	chickpeas		
planting date	May 27	May 24-25	May 24		
disease assessment date	Oct. 19	Oct. 12-13	Oct. 12		
rows assessed for disease	1	1	1		
harvest date	Oct. 21	Oct. 17	Oct. 17		
dates, applications 1 and 2	July 23, Aug. 1	July 22, Aug. 2	July 22, Aug. 2		
interval between applications	9 days	11 days	11 days		
growth stage, 1st application	100% R2	100% R2	100% R2		
canopy closure, 1st application	99-100%	98-100%	98-100%		
nozzles, pressure, 1st application	AIXR110015, 50 psi	AIXR110015, 50 psi	AIXR110015, 50 psi		
droplet size, 1st application	coarse	coarse	coarse		
canopy closure, 2nd application	100%	100%	100%		
nozzles, pressure, 2nd application	AIXR110015, 50 psi	AIXR110015, 40 psi	AIXR110015, 40 psi		
droplet size, 2nd application	coarse	coarse	coarse		
adjuvant	Masterlock, 6.4 fl oz/a	none	Masterlock, 6.4 fl oz/a	ıc	
fungicide spray volume	15 gal/ac	15 gal/ac	15 gal/ac		
application method	hand-held boom	hand-held boom	hand-held boom		
Sclerotinia incidence (% of plants	)				
Non-treated control	82 b	62 a	54 b	_	
PROPULSE 6 fl oz/ac	49 a	51 a	35 ab	_	
ENDURA 6 oz/ac	53 a		33 ab	=	
ENDURA 8 oz/c			28 a	_	
CV:		26.4	35.6	_	
Sclerotinia severity index (% of ca	anopy)				
Non-treated control	70 b	42 a	31 b	_	
PROPULSE 6 fl oz/ac	35 a	32 a	18 ab	_	
ENDURA 6 oz/ac	40 a		18 ab	_	
ENDURA 8 oz/c			11 a	_	
CV:	17.5	35.9	47.4		
Soybean yield					
Non-treated control	25 b	44 b	50 a	_	
PROPULSE 6 fl oz/ac	43 a	53 a	56 a	_	
ENDURA 6 oz/ac	42 a		50 a	-	
ENDURA 8 oz/c	10.7	40.5	62 a	_	
CV:	10.7	12.5	15		
ProPulse (6 fl oz/ac) versus End	lura (6.0 oz/ac)		COMBINED ANALY	/SIS, 2 studies	
	Sclerotinia incidenc	e (%) Sclerotini	ia DSI (%)	Yield	- Two sequential
UNTREATED	<b>68</b> a		а	<b>38</b> a	applications: full
PROPULSE 6 fl oz/ac	<b>42</b> a		' a	<b>50</b> a	R2 + 9-11 days
ENDURA 6 oz/ac	<b>43</b> a		а	<b>46</b> a	later
CV:	9.8	23.2		13.6	
ProPulse (6 fl oz/ac) versus nor	ı-treated		COMBINED ANALY	/SIS, 3 studies	
	Sclerotinia incidenc	- ` ′ ———	ia DSI (%)	Yield	
UNTREATED	<b>66</b> a	-	а	<b>40</b> a	-
PROPULSE 6 fl oz/ac	<b>45</b> a		<u>41%</u>	<b>51</b> a	27%
CV:	14.2	reduction 25	reduction	9.5	increase

# ProPulse 8 fl oz - single application

	prothiocona	ole (FRAC 3), 1.67 lk	os ai/gal; <b>fluopyram</b> (	FRAC 7), 1.67 lbs a	i/gal	
year	2020	2022	2023			
location	Carrington	Carrington	Carrington			
funding	Bayer	Bayer	Bayer			
variety	DSR-0418	AG09Xf0	P06T04E			
brand, maturity	Dairyland, 0.4	Asgrow, 0.9	Pioneer, 0.6			
row spacing	21 inches	14 inches	14 inches			
seeding rate	165,000 pls/ac	165,000 pls/ac	165,000 pls/ac			
previous crop	spring wheat	dry bean	chickpeas			
planting date	May 18	May 27	May 24			
disease assessment date	Oct. 16	Oct. 19	Oct. 12			
rows assessed for disease	1	1	1			
harvest date	Oct. 19	Oct. 21	Oct. 17			
date fungicide was applied	July 17	July 23	July 22			
growth stage, 1st applic.	100% R2	100% R2	100% R2			
canopy closure, 1st applic	75-90%	99-100%	95-100%			
nozzles, pressure, 1st applic.	AIXR110015, 60 psi	AIXR110015, 50 psi	AIXR110015, 50 psi			
droplet size, 1st applic.	medium	coarse	coarse			
adjuvant	Induce 0.125% v/v	Induce 0.125% v/v	Induce, 0.125% v/v			
fungicide spray volume	15 gal/ac	15 gal/ac	15 gal/ac			
application method	hand-held boom	hand-held boom	hand-held boom			
Sclerotinia incidence (% of p				_		
UNTREATED	38 a	74 b	63 b	_		
PROPULSE 6 fl oz/ac	45 a	53 a	57 ab	_		
PROPULSE 8 fl oz/ac	31 a	48 a	51 ab	=		
ENDURA 5.5 oz/ac		60 ab	42 a	_		
	CV: 20	18	22			
Sclerotinia severity index (%						
UNTREATED	15 a	63 b	43 b	=		
PROPULSE 6 fl oz/ac	23 a	36 a	37 ab	_		
PROPULSE 8 fl oz/ac	8 a	33 a	32 ab	_		
ENDURA 5.5 oz/ac		41 a	24 a	_		
	CV: 23	25	31			
Yield						
UNTREATED	49 a	30 b	47 b	_		
PROPULSE 6 fl oz/ac	49 a	39 a	51 ab	_		
PROPULSE 8 fl oz/ac	53 a	42 a	52 ab	_		
ENDURA 5.5 oz/ac		38 a	56 a	_		
	CV: 5.1	8.2	6.5	_		
ProPulse (6 and 8 fl oz/ac)	versus Endura (5.5 oz/a	ic)	COMBINED ANALY	YSIS 2 studies		
rior alco (o alia o il oziao)	Sclerotinia incidend		nia DSI (%)	Yield	Single fu	ingicide application at 100%
UNTREATED	<b>69</b> a		<b>3</b> a	<b>38</b> a	Sirigle it	R2
PROPULSE 6 fl oz/ac	55 a		<b>6</b> a	<b>45</b> a		112
PROPULSE 8 fl oz/ac	49 a		<b>3</b> a	47 a		
ENDURA 5.5 oz/ac	51 a		<b>3</b> a	47 a	<del></del>	
L.1001010.0000	CV: 13.3	19.		6.4	_	
		19.				
ProPulse (8 fl oz/ac) versu			COMBINED ANALY			
	Sclerotinia incidend	<u> </u>	nia DSI (%)	Yield		Single fungicide
UNTREATED	<b>58</b> a		<b>0</b> a	<b>42</b> a		application at 100% R2
PROPULSE 8 fl oz/ac	<b>43</b> a	<b>_26</b> %2	4 a 39%	<b>49</b> a	17%	-
	CV: 13.7	reduction 26.	.5 reduction	7.6	increase	

#### Revytek 8 fl oz - single fungicide application

	Revy	tek 8 fl oz - sir	ngle fungicide	application		
mefentrifluc	onazole (FRAC 3), 1.11 lb	s ai/gal; pyraclostro	<b>bin</b> (FRAC 11), 1.48 lk	os ai/gal; <b>fluxapyroxa</b>	d (FRAC 7)	), 0.74 lbs ai/gal
year	2020	2021	2021			
location	Carrington	Carrington	Carrington			
funding	BASF	BASF	Gowan			
variety	DSR-0418	DSR-0807	DSR-0807			
brand, maturity	Dairyland, 0.4	Dairyland, 0.8	Dairyland, 0.8			
row spacing	21 inches	21 inches	21 inches			
seeding rate	165,000 pls/ac	165,000 pls/ac	165,000 pls/ac			
previous crop	spring wheat	spring wheat	spring wheat			
planting date	May 18	May 12	May 12			
disease assessment date	Oct. 15	Oct. 4	Oct. 4			
rows assessed for disease	1	1	1			
harvest date	Oct. 16	Oct. 6	Oct. 7			
date fungicide was applied	July 14	July 26	July 26	The first fungicide		
growth stage, 1st applic.	100% R2	R3	R3	application was		
canopy closure, 1st applic	65-95%	1	1	delayed until R3 when weather did not favor		
nozzles, pressure, 1st applic.	AIXR110015, 60 psi	AIXR110015, 50 psi	AIXR110015, 50 psi	white mold earlier in		
droplet size, 1st applic.	medium	coarse	coarse	bloom.		
adjuvant	none	Masterlock 6.4 fl oz	Induce 0.25%			
fungicide spray volume	15 gal/ac	15 gal/ac	15 gal/ac			
application method	hand-held boom	hand-held boom	hand-held boom			
Sclerotinia incidence (% of p	lants)					
UNTREATED	26 b	34 a	35 a	_		
REVYTEK 8.0 fl oz/ac	30 b	35 a	33 a	_		
ENDURA 6.0 oz/ac	3 a		20 a	_		
	CV: 30.7	35.6	20.3	_		
Sclerotinia severity index (%	of canopy)					
UNTREATED	10 b	24 a	23 a	_		
REVYTEK 8.0 fl oz/ac	13 b	23 a	21 a	_		
ENDURA 6.0 oz/ac	1 a		12 a	=		
	CV: 39.5	19.8	26.9	_		
Yield						
UNTREATED	45 a	53 a	56 a	_		
REVYTEK 8.0 fl oz/ac	47 a	55 a	57 a	_		
ENDURA 6.0 oz/ac	49 a		62 a	_		
	CV: 15.1	8.6	9	_		
Revytek (8 fl oz/ac) versus	Endura (6.0 oz/ac)	COMBIN	IED ANALYSIS, 2 stu	ıdies		
Jun (o ii ozido) torada	Sclerotinia incidend		ia DSI (%)	Yield	Single f	ungicide application at R2 or
UNTREATED	<b>30</b> a	` '	7 b	<b>51</b> a	Single It	R3
DOMARK 5.0 fl oz/ac	31 a		<b>7</b> b	<b>52</b> a	The Cont	
ENDURA 5.5 or 6.0 oz/ac	12 a		7 a	55 a		fungicide application was delayed when weather did not favor white
	CV: 21.1	11.		2.3		mold earlier in bloom.
Povertok (9 fl. az/aa) varaus						
Revytek (8 fl oz/ac) versus			IED ANALYSIS, 3 stu ia DSI (%)			Oin als f
LINTDEATED	Sclerotinia incidend	- ` ´ <del></del>	ia DSI (%)	Yield F1 b		Single fungicide
UNTREATED	32 a			<b>51</b> b	20/	application at R2 or R3
DOMARK 5.0 fl oz/ac	33 a	_0%18.9		53 a	3%	

reduction

increase

CV:

reduction

# Revytek 8 fl oz - two fungicide applications

mefentrifluconazole	e (FRAC 3), 1.11 lbs	s ai/gal; pyraclostro	<b>bin</b> (FRAC 11), 1.48 lk	os ai/gal; <b>fluxapyroxa</b>	d (FRAC 7	), 0.74 lbs ai/gal
year 20	)21	2021	2022			
location C	arrington	Carrington	Carrington			
funding B	ASF	Gowan	BASF			
variety D	SR-0807	DSR-0807	AG09Xf0			
brand, maturity Da	airyland, 0.8	Dairyland, 0.8	Asgrow, 0.9			
row spacing 2	1 inches	21 inches	14 inches			
seeding rate 16		165,000 pls/ac	165,000 pls/ac			
previous crop sp		spring wheat	dry bean			
planting date M	_	May 12	May 27			
disease assessment date O	-	Oct. 4	Oct. 19			
rows assessed for disease 1	- · ·	1	1			
harvest date O	ct 6	Oct. 7	Oct. 21			
dates, applications 1 and 2 Ju		July 26, Aug. 6	July 23, Aug. 1			
interval between applications 11	-	11 days	_	The first fungicide application was		
	-	R3	9 days 100% R2	delayed until R3 when		
growth stage, 1st application Riccanopy closure, 1st application 10		100%		weather did not favor white mold earlier in		
, , ,			99-100%	bloom.		
nozzles, pressure, 1st application Al		AIXR110015, 50 psi	AIXR110015, 50 psi			
droplet size, 1st application co		coarse	coarse			
canopy closure, 2nd application 10		100%	100%			
nozzles, pressure, 2nd application Al		AIXR110015, 50 psi	AIXR110015, 50 psi			
droplet size, 2nd application co		coarse	coarse			
•	asterlock 6.4 fl oz	Induce 0.25%	Masterlock 6.4 fl oz			
fungicide spray volume 15	_	15 gal/ac	15 gal/ac			
application method ha	and-held boom	hand-held boom	hand-held boom			
Sclerotinia incidence (% of plants)			00.1	_		
Non-treated control	<b>42</b> a	<b>35</b> a	<b>82</b> b	_		
REVYTEK 8 fl oz/ac	<b>43</b> a	<b>33</b> a	<b>67</b> a	_		
ENDURA 6 oz/ac	<b>36</b> a	<b>20</b> a	<b>53</b> a	_		
CV:	38.8	20.3	14.4			
Sclerotinia severity index (% of cand				_		
Non-treated control	<b>27</b> a	<b>23</b> a	<b>70</b> b	=		
REVYTEK 8 fl oz/ac	<b>26</b> a	<b>21</b> a	<b>51</b> a	_		
ENDURA 6 oz/ac	<b>19</b> a	<b>12</b> a	<b>40</b> a	_		
CV:	25	26.9	17.5			
Soybean yield (bushels/acre)						
Non-treated control	<b>51</b> a	<b>56</b> a	<b>25</b> b	_		
REVYTEK 8 fl oz/ac	<b>51</b> a	<b>57</b> a	<b>33</b> b	_		
ENDURA 6 oz/ac	<b>55</b> a	<b>62</b> a	<b>42</b> a	_		
CV:	13	9	10.7			
Revytek (8 fl oz/ac) versus Endura			IED ANALYSIS, 2 stu	udies		
S	clerotinia incidenc	` ,	ia DSI (%)	Yield		quential applications: R2 or
Non-treated control	<b>53</b> a*	40	) a*	<b>44</b> a*		R3 + 9-11 days later
REVYTEK 8 fl oz/ac	<b>47</b> a	33	3 a	<b>47</b> a		fungicide application was delayed
ENDURA 6 oz/ac	<b>37</b> a	24	<b>1</b> a	<b>53</b> a	until R3	when weather did not favor white
CV:	13.8	20.	6	7.2		mold earlier in bloom.
Revytek (8 fl oz/ac) versus non-tre	ated	COMBIN	IED ANALYSIS, 3 stu	ıdies		
	clerotinia incidenc		ia DSI (%)	Yield		T
UNTREATED	<b>53</b> a		) a	<b>44</b> b		Two sequential applications: R2 or R3 + 9-
REVYTEK 8 fl oz/ac	47 a		3 a 18%	<b>47</b> a	6%	11 days later
CV:	6.3	reduction 8.8		0.7	increase	i i dayo latoi
GV.	0.0	150000011 0.0	, reduction	0.1	inorease	

# Topsin/generic 20 fl oz - single fungicide application

		thiophanate-met	hyl (FRAC 1), 4.5 lbs	ai/gal		
year	2020	2020	2020	2020	2020	2023
location	Oakes	Oakes	Carrington	Carrington	Carrington	Carrington
funding	ND Soybean Council	ND Soybean Council	ND Soybean Council	Gowan	BASF	ND Soybean Council
variety	GH0543X	14R09N	14R09N	DSR-0418	DSR-0418	21Xf07
brand, maturity	Golden Harvest, 0.5	Peterson Farms, 0.9	Peterson Farms, 0.9	Dairyland, 0.4	Dairyland, 0.4	Peterson Farms, 0.7
row spacing	22.5 inches	22.5 inches	21 inches	21 inches	21 inches	14 inches
seeding rate	165,000 pls/ac	165,000 pls/ac	165,000 pls/ac	165,000 pls/ac	165,000 pls/ac	165,000 pls/ac
previous crop	sunflowers	sunflowers dry bean		spring wheat	spring wheat	chickpeas
planting date	May 12	May 12	May 18	May 18	May 18	May 24-25
disease assessment date	Aug. 26. 28	Sept. 25	Oct. 12-15	Oct. 16	Oct. 15	Oct. 12-13
rows assessed for disease	1	1	1	1	1	1
harvest date	Oct. 8-9	Oct. 8-9	Oct. 15-16	Oct. 19	Oct. 16	Oct. 17
date fungicide was applied	July 8	July 8	July 10	July 16	July 14	July 22
growth stage, 1st applic.	65% R2, 35% R3	79% R2, 21% R3	89% R2, 100% bloom	100% R2	100% R2	100% R2
canopy closure, 1st applic	91% average	87% average	87% average	75-85%	65-95%	98-100%
nozzles, pressure, 1st applic.	AIXR110015, 60 psi	AIXR110015, 60 psi	AIXR110015, 60 psi	AIXR110015, 60 psi	AIXR110015, 60 psi	AIXR110015, 50 psi
droplet size, 1st applic.	medium	medium	medium	medium	medium	coarse
adjuvant	none	none	none	none	none	none
fungicide spray volume	15 gal/ac	15 gal/ac	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	hand-held boom	hand-held boom
Sclerotinia incidence (% of plants	s)					
UNTREATED	4 a	2 a	18 ab	25 a	26 b	79 a
TOPSIN or generic 20 fl oz/ac	4 a	4 a	25 b	26 a	16 ab	69 a
ENDURA 5.5 or 6.0 oz/ac	2 a	2 a	12 a	31 a	3 a	
CV	<b>/</b> : 55	46	43	53	31	13
Sclerotinia severity index (% of	canopy)					
UNTREATED	2 a	1 a	11 ab	8 a	10 b	60 b
TOPSIN or generic 20 fl oz/ac	2 a	2 a	17 b	8 a	5 ab	48 a
ENDURA 5.5 or 6.0 oz/ac	1 a	0 a	7 a	10 a	1 a	
CV	<b>/</b> : 46	49	53	68	40	15
Yield						
UNTREATED						
0.11.1.2.1.2.2	77 a	76 a	53 a	46 a	45 a	32 a
TOPSIN or generic 20 fl oz/ac	77 a 79 a	76 a 76 a	53 a 50 a	46 a 45 a	45 a 46 a	32 a 38 a
TOPSIN or generic 20 fl oz/ac	79 a 77 a	76 a	50 a	45 a	46 a	
TOPSIN or generic 20 fl oz/ac ENDURA 5.5 or 6.0 oz/ac CV	79 a 77 a 7: 3.5	76 a 79 a 3.8	50 a 54 a 6.8	45 a 42 a 8.2	46 a 49 a	38 a
TOPSIN or generic 20 fl oz/ac ENDURA 5.5 or 6.0 oz/ac	79 a 77 a 7: 3.5 rsus Endura (5.5 or 6	76 a 79 a 3.8 5.0 oz/ac)	50 a 54 a 6.8 COMBINED ANALY	45 a 42 a 8.2 (SIS, 5 studies	46 a 49 a	38 a
TOPSIN or generic 20 fl oz/ac ENDURA 5.5 or 6.0 oz/ac  CV  Topsin/generic (20 fl oz/ac) ver	79 a 77 a 7: 3.5 rsus Endura (5.5 or 6 Sclerotinia incidence	76 a 79 a 3.8 6.0 oz/ac) e (%) Sclerotini	50 a 54 a 6.8 COMBINED ANALY ia DSI (%)	45 a 42 a 8.2 SIS, 5 studies Yield	46 a 49 a 15.1	38 a 17
TOPSIN or generic 20 fl oz/ac ENDURA 5.5 or 6.0 oz/ac  CV  Topsin/generic (20 fl oz/ac) ver  UNTREATED	79 a 77 a 7: 3.5 rsus Endura (5.5 or 6 Sclerotinia incidence 15 a	76 a 79 a 3.8  6.0 oz/ac) e (%) Sclerotini	50 a 54 a 6.8  COMBINED ANALY ia DSI (%)	45 a 42 a 8.2 'SIS, 5 studies Yield 59 a	46 a 49 a 15.1 Single fungicide	38 a 17 application at early
TOPSIN or generic 20 fl oz/ac ENDURA 5.5 or 6.0 oz/ac  CV  Topsin/generic (20 fl oz/ac) ver  UNTREATED  TOPSIN or generic 20 fl oz/ac	79 a 77 a 78 3.5  Tous Endura (5.5 or 6) Sclerotinia incidence 15 a 15 a	76 a 79 a 3.8  5.0 oz/ac) e (%) Sclerotini 6	50 a 54 a 6.8  COMBINED ANALY ia DSI (%) is a	45 a 42 a 8.2 SIS, 5 studies Yield	46 a 49 a 15.1 Single fungicide	38 a 17
TOPSIN or generic 20 fl oz/ac ENDURA 5.5 or 6.0 oz/ac  CV  Topsin/generic (20 fl oz/ac) ver  UNTREATED	79 a 77 a 3.5  rsus Endura (5.5 or 6 Sclerotinia incidence 15 a 15 a 10 a	76 a 79 a 3.8  5.0 oz/ac) e (%) Sclerotini 6	50 a 54 a 6.8  COMBINED ANALY ia DSI (%) a 7 a	45 a 42 a 8.2  SIS, 5 studies  Yield  59 a 59 a	46 a 49 a 15.1 Single fungicide	38 a 17 application at early
TOPSIN or generic 20 fl oz/ac ENDURA 5.5 or 6.0 oz/ac  CV  Topsin/generic (20 fl oz/ac) ver  UNTREATED  TOPSIN or generic 20 fl oz/ac ENDURA 5.5 or 6.0 oz/ac  CV	79 a 77 a 78 3.5  Sclerotinia incidence 15 a 15 a 10 a 79 44.3	76 a 79 a 3.8  6.0 oz/ac) e (%) Sclerotini 6 7	50 a 54 a 6.8  COMBINED ANALY ia DSI (%) 6 a 7 a 1 a	45 a 42 a 8.2 SIS, 5 studies Yield 59 a 59 a 60 a 2.9	46 a 49 a 15.1 Single fungicide	38 a 17 application at early
TOPSIN or generic 20 fl oz/ac ENDURA 5.5 or 6.0 oz/ac  CV  Topsin/generic (20 fl oz/ac) ver  UNTREATED  TOPSIN or generic 20 fl oz/ac ENDURA 5.5 or 6.0 oz/ac	79 a 77 a 78 3.5  TSUS Endura (5.5 or 6) Sclerotinia incidence 15 a 15 a 10 a 79 44.3  TSUS NON-treated	76 a 79 a 3.8  5.0 oz/ac) e (%) Sclerotini 6 7 4 52.6	50 a 54 a 6.8  COMBINED ANALY ia DSI (%) 6 a 7 a 8 a 6 COMBINED ANALY	45 a 42 a 8.2 SIS, 5 studies Yield 59 a 59 a 60 a 2.9 SIS, 6 studies	46 a 49 a 15.1 Single fungicide	38 a 17 application at early
TOPSIN or generic 20 fl oz/ac ENDURA 5.5 or 6.0 oz/ac  CV  Topsin/generic (20 fl oz/ac) ver  UNTREATED  TOPSIN or generic 20 fl oz/ac ENDURA 5.5 or 6.0 oz/ac  CV  Topsin/generic (20 fl oz/ac) ver	79 a 77 a 3.5  rsus Endura (5.5 or 6 Sclerotinia incidence 15 a 15 a 10 a 44.3  rsus non-treated Sclerotinia incidence	76 a 79 a 3.8  6.0 oz/ac) e (%) Sclerotini 6 7 4 52.6	50 a 54 a 6.8  COMBINED ANALY ia DSI (%) 6 a 7 a 8 a 8 COMBINED ANALY ia DSI (%)	45 a 42 a 8.2  (SIS, 5 studies Yield  59 a 59 a 60 a 2.9  (SIS, 6 studies Yield	46 a 49 a 15.1  Single fungicide to f	38 a  17  application at early ull R2
TOPSIN or generic 20 fl oz/ac ENDURA 5.5 or 6.0 oz/ac  CV  Topsin/generic (20 fl oz/ac) ver  UNTREATED  TOPSIN or generic 20 fl oz/ac ENDURA 5.5 or 6.0 oz/ac  CV	79 a 77 a 78 3.5  TSUS Endura (5.5 or 6) Sclerotinia incidence 15 a 15 a 10 a 79 44.3  TSUS NON-treated	76 a 79 a 3.8  6.0 oz/ac) e (%) Sclerotini 6 7 4 52.6 e (%) Sclerotini 15	50 a 54 a 6.8  COMBINED ANALY ia DSI (%) 6 a 7 a 8 a 6 COMBINED ANALY	45 a 42 a 8.2 SIS, 5 studies Yield 59 a 59 a 60 a 2.9 SIS, 6 studies	46 a 49 a 15.1  Single fungicide to f	38 a  17  application at early ull R2

# Topsin/generic 20 fl oz - two sequential applications

	thianh	mate methyl (FRAC	<u> </u>		
		anate-methyl (FRAC		0000	
year		2020	2020	2023	
location		Oakes	Carrington	Carrington	
_	-	ND Soybean Council	-	ND Soybean Council	
•	GH0543X	14R09N	14R09N	21Xf07	
•	Golden Harvest, 0.5	Peterson Farms, 0.9	Peterson Farms, 0.9	Peterson Farms, 0.7	
row spacing	22.5 inches	22.5 inches	21 inches	14 inches	
seeding rate	165,000 pls/ac	165,000 pls/ac	165,000 pls/ac	165,000 pls/ac	
previous crop	sunflowers	sunflowers	dry bean	chickpeas	
planting date	May 12	May 12	May 18	May 24-25	
disease assessment date	Aug. 26. 28	Sept. 25	Oct. 12-15	Oct. 12-13	
rows assessed for disease	1	1	1	1	
harvest date	Oct. 8-9	Oct. 8-9	Oct. 15-16	Oct. 17	
dates, applications 1 and 2	July 8, 15	July 8, 15	July 10, 20	July 22, Aug. 2	The first fungicide
interval between applications	7 days	7 days	10 days	11 days	application was
growth stage, 1st application	65% R2, 35% R3	79% R2, 21% R3	89% R2, 100% bloom	100% R2	delayed until late R2 when weather did not
canopy closure, 1st application	91% average	87% average	87% average	98-100%	favor white mold
nozzles, pressure, 1st application	AIXR110015, 60 psi	AIXR110015, 60 psi	AIXR110015, 60 psi	AIXR110015, 50 psi	earlier in bloom.
droplet size, 1st application	medium	medium	medium	coarse	
canopy closure, 2nd application	95% average	94% average	98% average	100%	
nozzles, pressure, 2nd application	_	AIXR110015, 40 psi	AIXR110015, 40 psi	AIXR110015, 40 psi	
droplet size, 2nd application	coarse	coarse	coarse	coarse	
adjuvant		none	none	none	
fungicide spray volume		15 gal/ac	15 gal/ac	15 gal/ac	
application method	_	hand-held boom	hand-held boom	hand-held boom	
Sclerotinia incidence (% of plants					
Non-treated control	4 b	2 b	18 b	79 b	•
TOPSIN or generic 20 fl oz/ac	3 ab	3 b	11 ab	68 a	-
ENDURA 5.5 oz/ac	1 a	0 a	6 a		-
CV:		45.6	43.5	12.6	-
Sclerotinia severity index (% of ca					
Non-treated control	2 b	1 b	11 b	60 b	
TOPSIN or generic 20 fl oz/ac	1 ab	1 b	7 ab	47 a	-
	0 a	0 a	3 a	41 a	-
ENDURA 5.5 oz/ac		48.8	53.0	15.4	-
	40.0	40.0	33.0	10.4	
Soybean yield	77.0	76.0	52.0	22.0	
Non-treated control	77 a	76 a	53 a	32 a	-
TOPSIN or generic 20 fl oz/ac	79 a	76 a	55 a	40 a	
ENDURA 5.5 oz/ac	77 a 3.5	79 a 3.8	57 a 6.8	17	
CV:	3.0	3.0	0.0	17	
Topsin/generic (20 fl oz/ac) vers	sus Endura (5.5 oz/a	ic)	COMBINED ANALY	SIS, 5 studies	
	Sclerotinia incidenc	e (%) Sclerotini	a DSI (%)	Yield	Two sequential
UNTREATED	<b>8</b> b	5	b	<b>69</b> a	applications:
TOPSIN or generic 20 fl oz/ac	<b>6</b> b	3	ab	<b>70</b> a	early to late R2 +
ENDURA 5.5 oz/ac	<b>2</b> a	1	а	<b>71</b> a	7-11 days later
CV:	13.2	20.7		2.2	
			<b>-</b>		
Tonsin/generic (20 fl. oz/ac) vors	us non-treated				
Topsin/generic (20 fl oz/ac) vers			Two sequential a	• •	
Topsin/generic (20 fl oz/ac) vers COMBINED ANALYSIS, 6 studie	s	e (%) Solorotini	to late R2 + 7	'-11 days later	
COMBINED ANALYSIS, 6 studie	<b>s</b> Sclerotinia incidenc	<del>- ' '</del>	to late R2 + 7 a DSI (%)	Yield	-
COMBINED ANALYSIS, 6 studie UNTREATED	s Sclerotinia incidenc <b>26</b> a	18	to late R2 + 7 a DSI (%) a	Yield  60 a	- -
COMBINED ANALYSIS, 6 studie	Sclerotinia incidenc 26 a 21 a	18	to late R2 + 7 a DSI (%) a a 24%	Yield	5% increase

#### Fungicide efficacy: MANAGEMENT OF WHITE MOLD (Sclerotinia stem rot) OF SOYBEANS Topsin/generic 40 fl oz - single application thiophanate-methyl (FRAC 1), 4.5 lbs ai/gal 2021 2021 2021 2021 2022 2022 2022 2022 2022 2022 2022 year 2021 Incation Oakes Oakes Oakes Carrington Carrington Carrington Carrington Carrington Carrington Carrington Oakes Oakes Oakes funding ND Soybean Council variety AG06X8 AG09Xf0 AG11X8 AG009X8 AG06X8 AG09Xf0 AG06X8 XO0602E XO0731E AG09Xf0 DSR1120 AG11X8 AG09Xf0 brand, maturity Asgrow, 0.6 Asgrow, 0.9 Asgrow, 0.09 Asgrow, 0.6 Asgrow, 0.9 Asgrow, 0.6 Xitavo, 0.6 Xitavo, 0.7 Asgrow, 0.9 Dairyland, 1.1 Asgrow, 1.1 Asgrow, 0.9 Asgrow, 1.1 21 inches 21 inches 21 inches 14 inches row spacing 14 inches seeding rate 165,000 pls/ac 165.000 pls/ac 165.000 pls/ac 165.000 pls/ac 165.000 pls/ac 165,000 pls/ac 165.000 pls/ac 165.000 pls/ac 165.000 pls/ac 165.000 pls/ac 165,000 pls/ac 165,000 pls/ac 165,000 pls/ac various crops sunflowers sunflowers sunflowers dry bean dry bean various various previous crop dry bean May 17 May 17 May 27 May 27 May 27 May 27 June 2 June 2 June 2 planting date May 4 May 4 May 4 May 17 disease assessment date Sept. 30 Sept. 30 Sept. 30 Oct. 4-5 Oct. 4-5 Oct. 14-19 Oct. 14-19 Oct. 14-19 Oct. 21 Oct. 21 rows assessed for disease 1 Oct. 15-16 Oct. 15-16 Oct. 20 Oct. 20 Oct. 21-22 Oct. 21-22 Oct. 21-22 harvest date Oct. 7-8 Oct. 7-8 Oct. 7-8 Oct. 15-16 Oct. 20 Oct. 20 July 23 July 23 July 23 July 21 July 21 July 21 July 21 July 24 July 24 July 24 date fungicide was applied July 5 July 5 July 5 growth stage, 1st applic. 81% R2 100% bloom 66% R2 100% bloom 70% R2 100% bloom 100% R2 100% R2 100% R2 100%R2 100% R2 98% R2 100% bloom 100%R2 100%R2 100%R2 100%R2 canopy closure, 1st applic 95-100% 90-100% 95-100% 95-100% 95-100% 95-100% 99-100% 0.95 98-100% 97-100% 95-100% 95-100% nozzles, pressure, 1st applic. AIXR110015, 50 psi droplet size, 1st applic coarse adiuvant none none none none none none none none fungicide spray volume 15 gal/ac application method hand-held boom Sclerotinia incidence (% of plants) UNTREATED 55 a 43 b 51 a 8 b 77 b 62 a 92 a 80 b 91 b 79 b 3 a 12 a 8 a TOPSIN or generic 40 fl oz/ac 61 a 37 ab 52 a 2 a 62 ab 55 a 83 a 65 a 74 a 65 a 2 a 4 a 5 a ENDURA 5.5 oz/ac 54 a 27 a 44 a 51 a 42 a 81 a 63 a 79 ab 65 a 2 a 4 a 3 a 3 a 37.4 29.9 91.7 27.9 32.0 13.0 13.2 11.3 12.9 105.9 78.5 73.2 Sclerotinia severity index (% of canopy) UNTREATED 38 a 29 a 34 a 4 b 49 b 37 b 86 a 72 b 84 b 70 b 1 a 5 a 3 a TOPSIN or generic 40 fl oz/ac 42 a 26 a 36 a 1 a 37 ab 31 ab 73 a 55 a 64 a 53 a 1 a 2 a 1 a ENDURA 5.5 oz/ac 40 a 18 a 30 a 2 ab 30 a 19 a 71 a 53 a 68 a 55 a 1 a 1 a 1 a 36.2 52.1 17.1 117.1 39.4 49.0 15.3 16.5 13.0 15.5 133.6 98.2 84.8 Yield UNTREATED 60 a 67 a 68 a 58 a 42 b 41 a 25 b 29 b 21 b 25 b 67 a 73 a 71 a TOPSIN or generic 40 fl oz/ac 58 a 66 a 68 a 60 a 48 ab 43 a 34 a 40 a 32 a 34 a 67 a 75 a 71 a ENDURA 5.5 oz/ac 64 a 72 a 68 a 59 a 55 a 53 a 37 a 37 a 31 a 40 a 70 a 75 a 72 a CV: 14.7 11.5 12.1 10.6 13.3 10.6 4.8 5.8 4.8 Topsin/generic (40 fl oz/ac) versus Endura (5.5 oz/ac) Sclerotinia incidence Sclerotinia severity index Yield COMBINED ANALYSIS, 13 studies % of plants % of canopy bu/ac **51** b **39** b **50** b UNTREATED Single fungicide application at TOPSIN or generic 40 fl oz/ac **44** a **32** a **53** a early to full R2 **40** a **30** a **56** a ENDURA 5.5 oz/ac CV: 10.4 14.5 6.3 Topsin/generic (40 fl oz/ac) versus non-treated Sclerotinia severity index Sclerotinia incidence Yield COMBINED ANALYSIS, 13 studies % of plants % of canopy bu/ac **51** a **39** a **50** a UNTREATED Single fungicide application at **32** a **44** a **53** a TOPSIN or generic 40 fl oz/ac 14% 18%

8.5

reduction

11.6

early to full R2

		T	40 ft/-	Fungicide effica									
		Topsin			/ Endura 5.5 e-methyl (FRAC 1)	<u> </u>		<b>5.5 oz</b> /ac ap	<u> </u>	sequentiall	У		
year 20	21	2021	2021	2021	2021	2021	2022	2022	2022	2022	2022	2022	2022
location Oa		Oakes	Oakes	Carrington	Carrington	Carrington	Carrington	Carrington	Carrington	Carrington	Oakes	Oakes	Oakes
	Soybean Council	ND Soybean Council	ND Soybean Council	-	-	ND Soybean Council	-	-	=	ND Soybean Council	ND Soybean Council	ND Soybean Council	ND Soybean Co
variety AC	-	AG09Xf0	AG11X8	AG009X8	AG06X8	AG09Xf0	AG06X8	XO0602E	X00731E	AG09Xf0	DSR1120	AG11X8	AG09Xf0
brand, maturity As	grow, 0.6	Asgrow, 0.9	Asgrow, 1.1	Asgrow, 0.09	Asgrow, 0.6	Asgrow, 0.9	Asgrow, 0.6	Xitavo, 0.6	Xitavo, 0.7	Asgrow, 0.9	Dairyland, 1.1	Asgrow, 1.1	Asgrow, 0.9
row spacing 21	inches	21 inches	21 inches	14 inches	14 inches	14 inches	14 inches	14 inches	14 inches	14 inches	14 inches	14 inches	14 inches
seeding rate 16	5,000 pls/ac	165,000 pls/ac	165,000 pls/ac	165,000 pls/ac	165,000 pls/ac	165,000 pls/ac	165,000 pls/ac	165,000 pls/ac	165,000 pls/ac	165,000 pls/ac	165,000 pls/ac	165,000 pls/ac	165,000 pls/ac
previous crop va	rious crops	various crops	various crops	sunflowers	sunflowers	sunflowers	dry bean	dry bean	dry bean	dry bean	various	various	various
planting date Ma	ay 4	May 4	May 4	May 17	May 17	May 17	May 27	May 27	May 27	May 27	June 2	June 2	June 2
disease assessment date Se	ept. 30	Sept. 30	Sept. 30	Oct. 4-5	Oct. 4-5	Oct. 4-5	Oct. 14-19	Oct. 14-19	Oct. 14-19	Oct. 14-19	Oct. 21	Oct. 21	Oct. 21
rows assessed for disease 1		1	1	1	1	1	1	1	1	1	1	1	1
harvest date Oc	et. 7-8	Oct. 7-8	Oct. 7-8	Oct. 15-16	Oct. 15-16	Oct. 15-16	Oct. 21	Oct. 20	Oct. 20	Oct. 20	Oct. 21-22	Oct. 21-22	Oct. 21-22
dates, applications 1 and 2 Ju	ly 5, 12	July 5, 12	July 5, 19	July 23, 30	July 23, 30	July 23, 30	July 21, 28	July 21, 28	July 21, 28	July 21, 28	July 24, Aug. 5	July 24, Aug. 5	July 24, Aug. 3
interval between applications 7 of	-	7 days	14 days	7 days	•	7 days	7 days	7 days	7 days	7 days	12 days	12 days	10 days
growth stage, 1st application 81		66% R2, 100% bloom	70% R2, 100% bloom	100% R2	100% R2	100% R2	100%R2	100% R2	98% R2, 100% in bloo	100%R2	100%R2	100%R2	100%R2
canopy closure, 1st application 90	-100%	95-100%	95-100%	90-95%	95-100%	95-100%	99-100%	95%	98-100%	97-100%	95-100%	95-100%	95-100%
nozzles, pressure, 1st application Alz	XR110015, 50 psi	AIXR110015, 50 psi	AIXR110015, 50 psi	AIXR110015, 50 psi	AIXR110015, 50 psi	AIXR110015, 50 psi	AIXR110015, 50 psi	AIXR110015, 50 psi	AIXR110015, 50 psi	AIXR110015, 50 psi	AIXR110015, 50 psi	AIXR110015, 50 psi	AIXR110015, 5
droplet size, 1st application co	arse	coarse	coarse	coarse	coarse	coarse	coarse	coarse	coarse	coarse	coarse	coarse	coarse
canopy closure, 2nd application 10	0%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
ozzles, pressure, 2nd application Al.	XR110015, 50 psi	AIXR110015, 50 psi	AIXR110015, 50 psi	AIXR110015, 50 psi	AIXR110015, 50 psi	AIXR110015, 50 psi	AIXR110015, 50 psi	AIXR110015, 50 psi	AIXR110015, 50 psi	AIXR110015, 50 psi	AIXR110015, 50 psi	AIXR110015, 50 psi	AIXR110015, 5
droplet size, 2nd application co	arse	coarse	coarse	coarse	coarse	coarse	coarse	coarse	coarse	coarse	coarse	coarse	coarse
adjuvant no	ne	none	none	none	none	none	none	none	none	none	none	none	none
fungicide spray volume 15	-	15 gal/ac	15 gal/ac	15 gal/ac	15 gal/ac	15 gal/ac	15 gal/ac	15 gal/ac	15 gal/ac	15 gal/ac	15 gal/ac	15 gal/ac	15 gal/ac
application method ha	ind-held boom	hand-held boom	hand-held boom	hand-held boom	hand-held boom	hand-held boom	hand-held boom	hand-held boom	hand-held boom	hand-held boom	hand-held boom	hand-held boom	hand-held boon
erotinia incidence (% of plants)													
-treated control	55 a	43 b	51 b	8 b	77 bc	62 b	92 b	80 b	91 b	79 b	3 a	12 a	8 a
ura 5.5 oz applied twice	38 a	12 a	17 a	2 a	34 a	19 a	67 a	55 a	71 a	71 a	2 a	4 a	3 a
sin 40 fl oz / Endura 5.5 oz	38 a	24 a 38	29 a 37	3 a	62 ab	36 a	65 a	54 a	66 a	59 a	1 a	3 a	2 a 73
		30	31	92	20	32	13	13	"	13	100	79	73
erotinia severity index (% of canop		00.1	0.1.1		40.1	07.1	00.1	70.1	0.4.1	70.1			
n-treated control	38 a	29 b	34 b	4 b	49 b	37 b	86 b	72 b	84 b	70 b	1 a	5 a	3 a
ura 5.5 oz applied twice	27 a	8 a	10 a	1 a	17 a	6 a	55 a	44 a	58 a	58 a	1 a	1 a	1 a
sin 40 fl oz / Endura 5.5 oz	29 a 36	16 a	16 a	1 a	37 b 39	15 a 49	54 a	44 a	54 a	43 a	0 a	1 a	1 a 85
***	30	32	"	117	35	45	13	"	13	10	134	90	03
bean yield	00 -	07 -	00 h	50 -	40 -	44 -	05 h	00 h	04.1-	05.4	07 -	70 -	74 -
-treated control	60 a	67 a	68 b	58 a	42 a	41 a	25 b	29 b	21 b	25 b	67 a	73 a	71 a
ura 5.5 oz applied twice	67 a	76 a	85 a	58 a	59 b	58 a	47 a	47 a	38 a	38 a	68 a	76 a	70 a
sin 40 fl oz / Endura 5.5 oz CV:	65 a	73 a 8	82 a	58 a 6.1	48 a 9.1	53 a	43 a	44 a	40 a	42 a	68 a	79 a 5.8	69 a
		·		0.1	5.1		12.1	10.0	10.0	10.0	4.0	0.0	4.0
osin/generic (40 fl oz/ac) f			)			Sclerotinia incidenc	e Sclerotin	ia severity index	Yield				
vs Endura (5.5 oz/ac) ap	plied twice s	equentially				% of plants	% of can	ору	bu/ac	_			
MBINED ANALYSIS, 13 studio	es				UNTREATED	<b>51</b> b	39	b	<b>50</b> b				
o fungicide applications: early		davs later	_	NDUDA 5.5		30 a	22		60 a	_			
J		.,	E	NDURA 5.5 oz/a	ac applied twice					-			
			TOPS	SIN 40 fl oz f.b. E	ENDURA 5.5 oz	<b>34</b> a	24	а	<b>59</b> a				
					CV:	9.9	9.9	9	8.5	-			
osin/generic (40 fl oz/ac) f	ollowed by E	ndura (5.5 oz/ac	)			Sclerotinia incidenc	e Sclerotin	ia severity index	Yield				
vs non-treated						% of plants	% of can		bu/ac				
					UNTREATED	51 a	39		<b>50</b> a	-			
MBINED ANALYSIS, 13 studion fungicide applications: early		l dava late:			ENDURA 5.5 oz	34 a	33% 24		59 a	-			