

XXXIII. FUNGICIDES FOR CONTROL OF SOYBEAN RUST AND COMMON DISEASES OF SOYBEAN IN VIRGINIA (TAREC, Swine Unit Field)

- A. PURPOSE: To collect data needed to recommend fungicides for control of soybean rust, brown spot, anthracnose, frogeye leaf spot, pod and stem blight, and other soybean diseases in Virginia
- B. EXPERIMENTAL DESIGN:
1. Four randomized complete blocks
  2. Fifteen-ft alleyways between blocks
  3. Two, 32-ft rows at 36 in. spacing in each plot
- C. APPLICATION OF TREATMENTS: Treatments were applied in a foliar spray with 8002VS nozzles spaced 18 in. apart and delivering a spray volume of 16 gal/A. Applications were made at beginning pod stage (R<sub>3</sub> - pods ca. 0.25 in. long at 4<sup>th</sup> node down from top of plant).
- D. TREATMENT AND RATE/A:
1. Untreated check
  2. Folicur 432SC 4 fl oz (R<sub>3</sub>)
  3. Quadris 6 fl oz + Crop Oil Conc. 21 fl oz (R<sub>3</sub>);
  4. Stratego 250EC 7 fl oz + Induce 0.125% v/v (R<sub>3</sub>)
  5. Domark 230ME 5 fl oz (R<sub>3</sub>)
  6. Domark 230ME 5 fl oz + Orthene 97 8 oz (R<sub>3</sub>)
  7. Laredo EC 7 fl oz + Induce 2.64 fl oz (R<sub>3</sub>)
  8. Laredo EC 7 fl oz + Induce 2.64 fl oz (R<sub>3</sub>);  
Laredo EC 5 fl oz + Headline 250EC 6 fl oz (R<sub>5</sub>)
  9. Laredo EC 7 fl oz + Induce 2.64 fl oz (R<sub>3</sub>);  
Laredo EC 7 fl oz + Dithane DF 2 lb (R<sub>5</sub>)
  10. A9901 400SC 1.03 fl oz (R<sub>3</sub>)
  11. A12910 280SC 4 fl oz (R<sub>3</sub>)
  12. A12910 280SC 4 fl oz + Crop Oil Conc. 21 fl oz (R<sub>3</sub> and R<sub>5</sub>)
  13. Quilt 200SC 14 fl oz + Crop Oil Conc. 21 fl oz (R<sub>3</sub>)
  14. Headline 250EC 4.7 fl oz + Folicur 432SC 3.1 fl oz (R<sub>3</sub>)
- E. ADDITIONAL INFORMATION:
1. Location: TAREC, Suffolk
  2. Planting date and cultivar: 23 May 2005, Asgrow 5603 RR
  3. Crop history: corn 2004
  4. Soil fertility report:
 

pH.....	6.1
Ca .....	585 ppm
Mg .....	71 ppm
P .....	32 ppm
K.....	113 ppm
Zn .....	1.0 ppm
Mn .....	3.7 ppm
Soil type .....	Nansemond fine sandy loam
  5. Herbicide: Roundup Ultra Max 22 fl oz/A (13 Jun, 27 Jul)
  6. Harvest date: 11 Nov 2005

Table 115. Incidence of foliar diseases and defoliation in soybeans on October 1.\*

Treatment, rate/A and application date	% frogeye leaf spot	% brown spot	% cercospora blight	Total % disease	% defoliation
Untreated check .....	8.3 a	7.8 a	35.0 a	51.0 a	25.0 a
Folicur 432SC 4 fl oz (8/16).....	2.8 c-e	5.0 b	20.0 b	27.8 bc	17.0 b
Quadris 6 fl oz + Crop Oil Conc. 21 fl oz (8/16).....	2.3 de	3.8 b-d	10.8 g	16.8 fg	9.8 d
Stratego 250EC 7 fl oz + Induce 0.125% v/v (8/16).....	1.8 e	3.8 b-d	9.5 g	13.8 g	7.5 d
Domark 230ME 5 fl oz (8/16) .....	4.8 bc	2.8 d	16.3 b-f	23.8 b-f	11.8 b-d
Domark 230ME 5 fl oz + Orthene 97 8 oz (8/16).....	2.5 c-e	4.8 bc	14.0 c-g	21.3 c-f	10.0 d
Laredo EC 7 fl oz + Induce 2.64 fl oz (8/16) .....	4.3 b-d	3.8 b-d	17.5 b-d	25.5 b-d	12.5 b-d
Laredo EC 7 fl oz + Induce 2.64 fl oz (8/16) Laredo EC 5 fl oz + Headline 250EC 6 fl oz (8/29).....	2.8 c-e	3.3 b-d	11.8 e-g	17.8 fg	9.5 d
Laredo EC 7 fl oz + Induce 2.64 fl oz (8/16) Laredo EC 7 fl oz + Dithane DF 2 lb (8/29).....	2.3 de	4.5 b-d	13.0 d-g	19.8 d-g	11.5 cd
A9901 400SC 1.03 fl oz (8/16).....	5.3 b	5.0 b	19.0 bc	29.3 b	16.0 bc
A12910 280SC 4 fl oz (8/16).....	4.0 b-e	4.0 b-d	17.0 b-e	25.0 b-e	12.0 b-d
A12910 280SC 4 fl oz + Crop Oil Conc. 21 fl oz (8/16, 8/29) .....	3.3 b-e	3.0 cd	12.0 e-g	18.3 e-g	9.5 d
Quilt 200SC 14 fl oz + Crop Oil Conc. 21 fl oz (8/16).....	1.8 e	4.0 b-d	11.0 fg	16.8 fg	7.5 d
Headline 250EC 4.7 fl oz + Folicur 432SC 3.1 fl oz (8/16).....	2.3 de	3.5 b-d	13.0 d-g	17.3 fg	8.8 d
<b>LSD.....</b>	<b>2.4</b>	<b>1.9</b>	<b>5.3</b>	<b>7.0</b>	<b>5.4</b>

\* Data represent percent leaf area with symptoms on entire plant. Total % disease represents sum of frogeye leaf spot, brown spot and Cercospora blight ratings. Defoliation scale: 0=none, 100=no leaves on plants.

Means followed by the same letter(s) in a column are not significantly different according to Fisher's Protected LSD (P=0.05)..

Table 116. Pod discoloration, defoliation, yield and grade characteristics of soybeans.

Treatment, rate/A and application date	% discolored pods <sup>1</sup> (Oct 16)	% defol- iation <sup>2</sup> (Oct 16)	Yield <sup>3</sup> (lb/A)	Weight/ 100 seed (g)	% purple seed stain <sup>4</sup>	% phomop- sis seed blight <sup>4</sup>
Untreated check .....	66.3 a	98.5	32.1	13.3 b-e	17.5 a-e	1.0
Folicur 432SC 4 fl oz (8/16).....	56.3 b	96.8	32.9	13.1 c-e	18.5 a-d	2.0
Quadris 6 fl oz + Crop Oil Conc. 21 fl oz (8/16).....	32.5 e-g	95.0	32.0	13.9 a	14.5 b-e	1.8
Stratego 250EC 7 fl oz + Induce 0.125% v/v (8/16).....	41.3 c-e	96.5	35.5	13.9 a	13.0 de	2.0
Domark 230ME 5 fl oz (8/16) .....	40.0 de	96.8	33.1	13.6 a-c	21.0 a	1.0
Domark 230ME 5 fl oz + Orthene 97 8 oz (8/16).....	50.0 bc	96.8	30.9	13.5 a-d	17.5 a-e	0.8
Laredo EC 7 fl oz + Induce 2.64 fl oz (8/16) .....	52.5 b	97.0	32.0	13.0 de	19.3 a-c	0.5
Laredo EC 7 fl oz + Induce 2.64 fl oz (8/16) Laredo EC 5 fl oz + Headline 250EC 6 fl oz (8/29).....	27.5 f-h	95.0	30.9	13.2 b-e	16.5 a-e	1.8
Laredo EC 7 fl oz + Induce 2.64 fl oz (8/16) Laredo EC 7 fl oz + Dithane DF 2 lb (8/29).....	48.8 b-d	96.8	33.4	13.5 a-e	17.5 a-e	1.5
A9901 400SC 1.03 fl oz (8/16).....	47.5 b-d	88.5	32.2	12.9 e	20.3 ab	1.8
A12910 280SC 4 fl oz (8/16).....	36.3 ef	95.3	34.0	13.5 a-d	17.0 a-e	1.5
A12910 280SC 4 fl oz + Crop Oil Conc. 21 fl oz (8/16, 8/29).	23.8 gh	94.8	32.9	13.8 ab	7.0 f	2.3
Quilt 200SC 14 fl oz + Crop Oil Conc. 21 fl oz (8/16).....	40.0 de	95.5	32.8	13.6 a-c	12.0 ef	2.5
Headline 250EC 4.7 fl oz + Folicur 432SC 3.1 fl oz (8/16) .....	20.0 h	93.0	31.5	13.3 b-e	13.5 c-e	1.0
<b>LSD.....</b>	<b>10.0</b>	<b>n.s.</b>	<b>n.s.</b>	<b>0.6</b>	<b>5.9</b>	<b>n.s.</b>

<sup>1</sup> Discolored pods caused by growth of sooty molds during wet weather from 4 Oct to 12 Oct.

<sup>2</sup> Defoliation rating scale: 0=none, 100=no leaves on plants.

<sup>3</sup> Yields of soybeans with 13.5% moisture. One bushel equals 60 lb. Soybeans were harvested on 11 Nov.

<sup>4</sup> Data are percent of 100 seed with symptoms of each disease.

Means followed by the same letter(s) in a column are not significantly different according to Fisher's Protected LSD (P=0.05). "n.s." = not significant.