

## Foliar Fungicides for Disease Control on Soft Red Winter Wheat

### Bruce SCIA Major Grant Project

#### Purpose:

Evaluate effectiveness of Stratego applied alone and sequentially with Proline and Pressaro fungicide on disease control, yield, and quality of soft red winter wheat.

#### Methods:

Five Bruce County farmers growing soft red winter wheat conducted two replicate strip trials evaluating foliar fungicides.

Treatments included:

1. Check – no fungicide.
2. Stratego at growth stage 31 (first node)
3. Stratego, followed by Proline at heading (close to day 2 as possible)
4. Stratego, followed by Prosaro 421 SC (Folicur + Proline); applied sequentially within 1 day



Stands were assessed prior to fungicide application for growth stage and disease. Disease incidence ratings (scale 1-10) were assessed at 5-10 locations within each treatment. Disease control ratings were made at late tillering (Growth stage 31), and early dough stage. Grain samples following harvest were graded.

#### 2009 Results (Table 1):

At Growth stage 31 (late tillering) disease pressure was low, with powdery mildew the most common disease present. Fungicide application at this stage increased yield by 5 bu/ac versus the check (3 locations). Over 2 years (2008 – 2009) early fungicide improved yields by 5 bu/ac on average. Weather conditions remained quite dry during flowering, with moderate to high level of physiological fleck present in several plots. Disease ratings during grain fill, indicated low levels of Staganospra and Fusarium present. Early fungicide followed by Proline at heading yielded 13% (8 bu/ac) greater than the check (4 locations). Early fungicide followed by Prosaro (Folicur + Proline) increased yields only marginally over the Proline treatment. None of the samples including the check treatment of wheat were downgraded due to Fusarium.

#### Summary:

In 2009, this project demonstrated an increase in yield and dollar return from the application of early fungicide. This was consistent with results from 5 locations in 2008. It is interesting that an increase in yield occurred from early fungicide even though foliar disease levels were quite low. The Proline and Prosaro treatments in combination with early fungicide improved yields with returns equal to the check. Fusarium levels in the grain were low in 2008 and 2009.

#### Next Steps:

This study should be repeated with more locations and include treatment with split nitrogen application to evaluate the benefit of intensive management

**Table 1: 2009 Results**

Location	Variety	Check	Early Fungicide	Early Fungicide + Proline	Early Fungicide + Prosaro
		<b>Yield bu/ac</b>			
Ripley	Emmit	108		115	117
Chesley	25W41	55	63	66	71
Walkerton	25R47	58	63	66	70
Formosa	Emmit	77	78	80	79
Walkerton	25R47		112	111	109
Average of 3 locations with all		63	68	71	73
Average of 4 with early & Proline			79	81	
Average of all				88	89
Cost/acre (product +appl) <sup>1</sup>			\$8.50	\$41.00	\$43.05
\$ Return over check (3 locations) <sup>2</sup>			\$14.00	-\$5.00	\$1.95
2 Year Yield Increase over check (2008 - 2009) Bu/ac			5.0	9.5	10.5
1. Cost/acre based on Stratego (\$8.50), Proline ( \$22.50), Pressaro (\$24.55) + 1 application (\$10.00)					
2. Return based on \$4.50/bu Soft Red Wheat price					

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5 farmer co-operators

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