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Canola Fungicide Trial Protocol

A common disease in Saskatchewan canola is sclerotinia caused by Sclerotinia sclerotiorum1. Symptoms first appear at the end of flowering, when conditions are hot and moist. Symptoms include light brown lesions, evolving into greyish white and eventually bleaching the stems. Therefore, application of a fungicide is a great tool in reducing diseases in canola but comes at a cost. Unfortunately, the decision to apply a fungicide isn't always simple. The risk of disease in each field must be evaluated individually. Assessing a fungicide application's efficacy on yield, grade and economics through the use of check strips is a great tool.

Objective:

The objective of this field scale trial is to evaluate fungicide effectiveness and economics on canola under different environmental conditions and risk factors.

1Sclerotinia stem rot. Diseases. Canola Encyclopedia. Canola Council. https://www.canolacouncil.org/canola-encyclopedia/diseases/sclerotinia-stem-rot/#disease-cycle-for-sclerotinia-stem-rot

Project Overview:

Cooperators will implement a replicated field-scale trial comparing fungicide applications versus untreated check strips, using their own equipment and otherwise normal practices. An agronomist/trial manager will provide support throughout the season, including setting up the trial and collecting data. Statistical analysis of the data will be conducted following harvest, and a report with results including economic analysis will be provided. Data from all on-farm trials will also be pooled to examine the results across different management, soil, and weather conditions. Results from all trials will be publicly available, however individual farm data will be kept anonymous, apart from the location of the trial (nearest town or R.M.). Collaborators will be invited to join a network of producers who are conducting on-farm research through field tours and a year-end wrap up meeting. This program is available to members in good standing.

Study Design:

Option A:
1) Untreated Check
2) Treated with Fungicide

Option B:
1) Untreated Check
2) Single Application
3) Dual Application

Rep	1		2		3		4	
Plot	1	2	3	4	5	6	7	8
Trt	1	2	2	1	1	2	2	1
	Untreated	Treated	Treated	Untreated	Untreated	Treated	Treated	Untreated

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Recommended application timings:

- 1st application: 20-50% flowering
- 2nd application: 7-14 days after first application

Flowering guides:

-https://www.canolacouncil.org/canola-watch/2017/06/28/how-to-count-10-50-flower/
-https://www.canolacouncil.org/download/157/canola-encyclopedia/18605/canola-growth-stages-blooming-final

Fungicides will be applied according to label recommendations, will be replicated four times, for a total of 8 or 12 strips and randomized within the field. Apart from fungicide application, all strips must be managed the same agronomically including seeding, fertility, and pesticide (excluding fungicide) application. Variable rate (VR) fertilizer application can be used. An example randomized field plan is shown below. Layouts will be provided.

Data Collection:

Agronomists or trial managers will help the cooperator seed the trial according to the protocol and will complete the following in-season data collection.

- Spring or fall soil nutrient sample
- Soil samples to measure verticillium inoculum in the soil a composite for the whole trial area. Across the whole trial area, collect five soil cores (0-6") from each point in a "W" pattern. Mix all cores in a bucket and place ~400 g of mixture in plastic bag labelled with trial # and date
  - Spring 2026
  - Fall 2026
- Plant density (if plant stand looks inconsistent)
- If hail damage - Count damaged stems/heads in 1 m2 row
- Disease Assessments at 70% + seed color change (SCC)
- Fall Stem Sample Testing: one week after harvest or after swathing
  - Cut 25 stems down to approximately 9", over the entire trial area
- Blackleg Race ID and Verticillium Testing Submission:
  - How to: cut 12 stems close to ground, using stems from each plot, cut 12 inches long, air dry for 24hrs, place in labeled paper bag
  - email info@saskoilseeds.com
  - provide the following information:
    - Sample Name, Agronomist name, Grower Name, Farm Name, Mailing Address, Town, RM, Land Location, Email
- Yield – weighed separately for each treatment strip using weigh wagon or grain cart scale
- Harvest samples for each plot
- Regularly scouting for treatment differences in weed pressure, flowering, maturity, disease pressure, plant health, or plant structure
- Economical breakdown
- Management data
- Weather data

For more information or to participate in the program contact:

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