Managing Sclerotinia Update 2023

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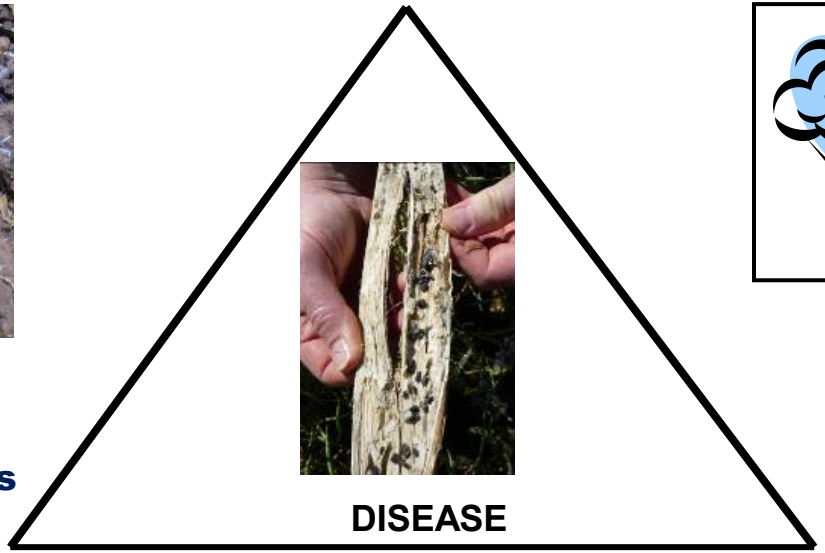
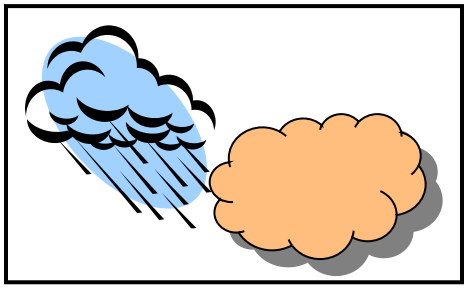
INTRODUCTION

- Outbreaks of Sclerotinia are driven by:
  - Rainfall leading up to and during flowering
  - Commencement date of flowering
  - Previous outbreaks of the disease
- Long leaf wetness periods are critical for infection to occur
- Canola can quickly build up levels of sclerotia
- Sclerotinia is slow to develop compared to other diseases
- Early stem infections cause the greatest yield loss
- Be aware of the legacy affect
- Timing of application is critical for foliar fungicides (Bloom stage)

PATHOGEN

Depends on size of sclerotia populations in soil





ENVIRONMENT

Extended periods of leaf wetness >48hrs forecast

Crop is at least 20 – 30% bloom

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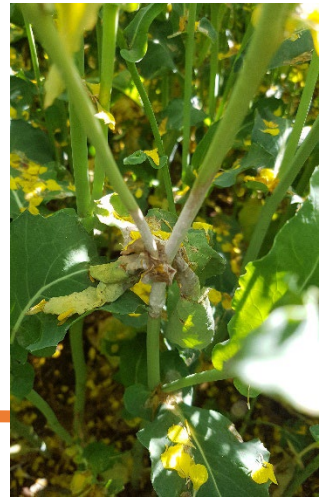
The Sclerotinia myths

- Sclerotinia is a warm weather disease
  - BUSTED – Disease is driven by moisture availability

- Every rainfall event during flowering is a risk
  - BUSTED – Only certain rainfall events are a disease risk

- Petal testing is a reliable predictor of disease
  - BUSTED – Levels of petal infestation generally will not correlate with stem infection

Sclerotinia infection



Start of flowering

Foliar fungicide application

FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC

Sclerotinia spore release

DISEASE MONITORING - 2022

Development of Sclerotinia stem rot in the Western District

DISEASE MONITORING

% Petal and Stem Infection

Date	Paddock					
	1	2	3	4	5	6
	Willaura	Willaura	Willaura - south	Westmere	Streatham	Streatham
12/8	8	48	38	6	14	6
29/8	42	56	34	16	26	30
12/9	12	12	0	4	16	2
10/10	24	18	4	22	18	14
Plant Infection	3	44	16	10	8	14
Plant Infection (Sprayed)	0	6	12	4	5	7

Foliar fungicides

- Effective control when applied correctly
  - Yield responses vary between years
  - Timing is critical
  - High water rates for good coverage
    - At least 100L/ha ground rig
  - Canopy penetration
  - Coverage of early petals prior to drop
- Does my yield potential justify a two application strategy..?

Image: Bayer CropScience - Canada

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When to Apply…???

Best applied at 20 – 30% bloom
20% Bloom (14 – 16 flowers off main stem)
30% Bloom (20 flowers off main stem)

Apply a single application of VERITAS® OPTI between 20% and 50% (full bloom) flowering.

Under high disease pressure apply as part of a multiple spray

Apply Prosaro between 20 and 50% (full bloom) flowering.

For best results apply as a preventative application at 20-30% flowering prior to significant disease expression (refer to **General Instructions – Disease control in Canola**).

Good coverage throughout the entire canopy

Infection of canola stems and branches occurs when infected petals fall and lodge in the lower canopy of the plant, particularly during wet or humid conditions.

The objective of the Sumisclex application is to treat as many petals as possible prior to petal drop and before pods set.

Application should, therefore, take place by 30% bloom (i.e. 30% of flowers open on the main stem), at which stage the maximum number of flowers are open at one time and little petal fall has occurred.

Application should not be made after mid-flowering.

If targeting Sclerotinia Stem Rot, for best results apply as a preventative spray at 20% flowering. Good coverage of entire crop canopy is essential. Use the higher rate in higher yielding crops where disease risk is high.

DO NOT apply after crop growth stage BBCH 62 (20% flowering).


20% Bloom


30% Bloom


50% Bloom

DO I NEED A FOLIAR FUNGICIDE..?

Assess Your Sclerotinia Risk

- Determine if there is a likely disease problem
  - High frequency of broadleaf crops/pastures in the paddock
    - Especially canola and lupin
  - History of sclerotinia in the paddock or property
    - No sclerotia = No disease
  - Late winter/spring rainfall forecasts are favourable for Sclerotinia development
    - Long periods of canopy wetness during flowering (48+hours)
    - No rain = No disease
  - Early flowering canola crops
    - Exposure to infection events

- Use the SclerotiniaCM app to assess likelihood of economic response

Current registered foliar fungicides

Name	Active Ingredients	Manufacturer
Rovral®	iprodione (250g/L)	FMC
Sumisclex®500	procymidone (500g/L)	Sumitomo
Prosaro®420SC	prothioconazole (210g/L)+tebuconazole (210g/L)	Bayer
Aviator Xpro®	prothioconazole (150g/L)+ bixafen (75g/L)	Bayer
Miravis®Star	pydiflumetofen (100g/L)+fludioxonil (150g/L)	Syngenta
Maxentis® EC	azoxystrobin (133g/L)+prothioconazole (100g/L)	Adama
Veritas® Opti	tebuconazole (370 g/L)+azoxystrobin (222g/L)	Adama

SCLEROTINIA IN CROPPING SYSTEMS

Developing Management Strategies for Sclerotinia across the cropping rotation

- Integration of Sclerotinia management strategies across canola and pulse crops
  - Lupin, chickpea, faba bean, lentil, and peanut
- Improve understanding of disease epidemiology
- Understand impacts on yield
  - Economic thresholds
- Development of effective management strategies
  - Foliar fungicides
  - Crop rotations
  - Crop husbandry
- Legacy affect of pulse crops

SCLEROTIA PRODUCTION – 2021 LUPIN

Treatment	Sclerotes harvested (kg/ha)	Total Sclerotes (kg/ha)
Full Control	51	173
Nil	71	186
Contaminated seed low	85	193
Contaminated seed high	78	195
Sclerotes low	83	190
Sclerotes high	77	205

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CHALLENGES AHEAD

- Legacy affect on canola production in 2023 and beyond
  - Three years of disease progression – high sclerote populations
  - Development of disease in lower rainfall regions
- Fungicide application
  - Timing of application/Product choice
  - Logistics of application
- IDM approach

POSITIVES

- Taking a whole of rotation approach to disease management

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