SPECIAL BULLETIN

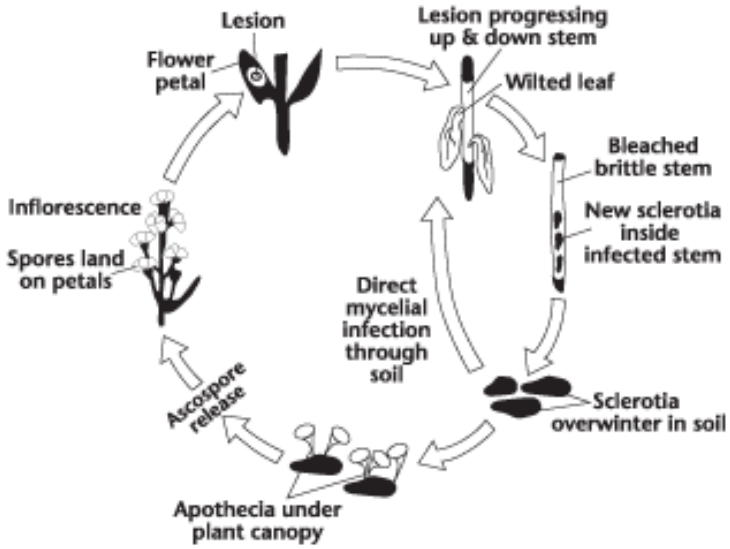
Sclerotinia Head Rot Management in Sunflowers

Sunflowers, sclerotinia head rot and fungicides

Sclerotinia can be a devastating disease and in sunflower it is highly dependent on weather conditions. Sclerotinia Head Rot infection is dependent on the ascospore infection.

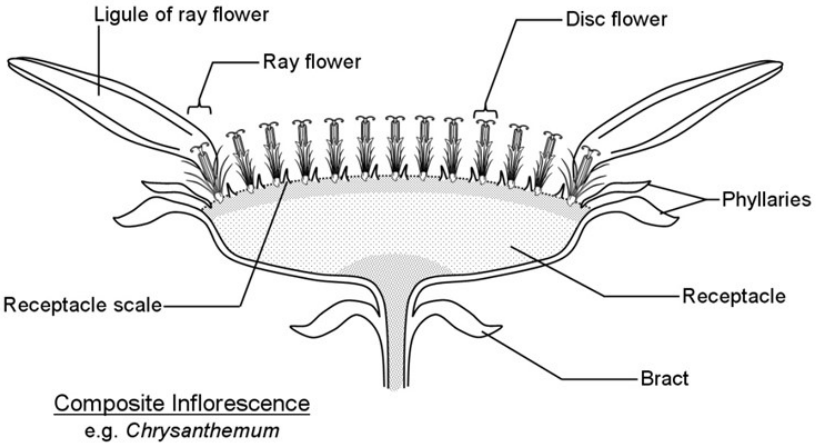
What causes sclerotinia head rot?

Wet soil conditions over a period of 10 to 14 days stimulate the sclerotia dropped from a previous crop to germinate creating tiny mushrooms. These mushrooms produce apothecia or tiny spores which can be wind-blown to nearby fields.



The ***spores need dew or rain and dead or senescing plant tissue such as dead florets to germinate and infect***. Wet and cloudy conditions are necessary for the disease advancement.

Like canola, there is a specific application window recommended for sclerotinia fungicide control.



Composite Inflorescence
e.g. *Chrysanthemum*

Application Period

R5.1 – R5.2 is when many disc flowers are starting to dry up, which is the ideal food source for the ascospores. Heavy rainfalls and high humidity are common in late July, making conditions ideal for sclerotia development.

Registered fungicides for sclerotinia head rot control:

Until recently, there were no fungicides registered for sclerotinia head rot control in sunflowers. A few products have been on the market for a couple of years. ***With correct timing, sclerotinia infection has been found to be reduced and yield increased***. In trials conducted in Morden, Manitoba from 2009-2011, fungicides were found to reduce sclerotinia head rot infection up to 50%.

Product	Rate	Timing
Lance WDG	140-260 g/acre	Apply at beginning of flower for optimal disease suppression. Use the higher rate when disease pressure is high or there is a history of high disease in the field.
Proline	170 mL/acre	Apply when crop is in 10-50% disk flower bloom stage (R5.1 - R5.5) **Apply with non-ionic surfactant.*
Quash	115 g/acre	First preventative application at early to mid bloom or 7-14 days later. **Since these uses are registered under the User Requested Minor Use Label Explansion (URMULE) program, the manufacturer assumes no responsibility for fungicide performance. Those who apply these uses do so at their own risk.*
Vertisan **product in low supply*	700 mL/acre	Begin applications prior to disease development and continue on a 7 to 14 day interval as disease risk continues.

Source: 2019 Manitoba Agriculture Guide to Field Crop Protection

CGC Grading Standards for Canada No.1

Sunflower Seed, Canada Confectionery (CAN)

	Standard of quality		Damage					Foreign material included in dockage				
Grade name	Minimum test weight (kg/hl)	Degree of soundness	Head rot %	Heated %	Insect damage %	Total %	Dehulled seeds %	Excreta %	Other grains %	Sclerotinia %	Soft earth pellets %	Stones %
No. 1 Canada	31 (155)	Well matured and sweet	2	0.5	2	4	5	0.005	2.5	1	2.5	0.1

Sunflower Seed, Canada Oil (CAN)

	Standard of quality		Damage					Foreign material included in dockage				
Grade name	Minimum test weight (kg/hl)	Degree of soundness	Head rot %	Heated %	Insect damage %	Total %	Dehulled seeds %	Excreta %	Other grains %	Sclerotinia %	Soft earth pellets %	Stones %
No. 1 Canada	35.0 (169)	Well matured and sweet	2	0.5	2	5	5	0.02	2.5	1	2.5	0.1

Sunflower seeds are an edible product and graded based on quality. Poor quality sunflowers affects the marketability of the crop and can result in dockage. Prevention is key!

Questions? Call NSAC Agronomist at 204-745-6776.