



Sclerotinia sclerotiorum is a fungus that overwinters as small, black structures (sclerotia) attached to infected plant portions or in the soil. Sclerotia can survive at least several years. After a moisture-conditioning period of at least 70 days, sclerotia close to the soil surface produce a small, stalked, cup-shaped fruiting structure (apothecium), which releases ascospores into the air. These spores may infect senescent tissue such as dying leaves or petals ready to drop. Spores may also infect injured or diseased tissues such as leaves with leaf spots, stems with black leg, or plant parts with freeze injury. Plants in wheel tracks are highly susceptible to infection. Sclerotia also may germinate and directly attack plants at or below the soil line. After initially colonizing a tiny portion of a plant part, the fungus can invade the rest of the plant and can grow from plant-to-plant within a field. Moderate temperatures and moist conditions favor infection and disease spread; rains, dews, or irrigation practices that keep foliage wet for long periods are associated with *Sclerotinia* outbreaks.

Other plant hosts include bean, cabbage, carrots, pea, lettuce, potato, green pepper, cucurbits, parsnip, radish, canola, flower seed crops, and sunflower; hundreds of plant species are susceptible to *Sclerotinia*. Dandelion (*Taraxacum officinale*) is a very susceptible weedy host.

Sclerotinia grows mainly on aboveground plant parts, producing a cottony, white mold. As turnip leaves, stems, or petioles decay, small white bodies appear in the white mold and gradually change from white to black. Finally, the mold is replaced by numerous hardened sclerotia; which can form on the outside of plant tissues or inside of stems and storage roots. On seed crops, stem attacks can cause severe losses. Diseased tissues eventually bleach white. Sclerotia, which are black on the surface and white inside, associated with this bleached tissue, are diagnostic.

Cultural controls should be utilized for all turnip seed production; methods include:

- Rotate out of turnip for at least three years to non-susceptible crops such as grasses or grains.
- Encourage maximum air movement between rows by row orientation or row spacing or seeding density.

Protective fungicide sprays should be used to prevent *Sclerotinia* from occurring in turnip seed fields. Typically, fungicide applications will be necessary when disease pressure is high and conditions are wet or humid. The first fungicide application in a healthy seed field is normally made at petal fall. In turnip seed crops that are experiencing an outbreak of leaf spot disease, including leaf spots associated with black leg and Phoma root rot, fungicide applications should commence when conditions are favorable for *Sclerotinia*. Protective fungicides are especially critical if the field or neighboring field has a history of *Sclerotinia*, or if disease is occurring in the area. Regular field scouting can detect early infections and a protection fungicide program should commence if *Sclerotinia* is detected.

Foliar fungicides labeled for use on turnip or rutabaga crops include:

- Fontelis (Group 7) at 16 to 30 fl oz/A on 7- to 14-day intervals. Use at least 10 gal/A for aerial applications.
- Rovral 4 Flowable (Group 2) at 2 to 4 pints/A in 20 to 100 gal water for seed production only. Oregon (SLN OR-130001) and Washington (SLN WA-960027) only. Use at least 10 gal/A for aerial applications.
- Switch 62.5WG (Group 12 + 9) at 11 to 14 oz/A on 7- to 10-day intervals is labeled for other diseases and will aid in controlling *Sclerotinia*. No aerial applications (by plane) on label.

Sclerotinia colonizing senescing Brassica leaves below, note sclerotial bodies forming.

Sclerotia formation on stems (right and below).



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