



The TGA Insight



How to identify Sclerotinia, Blackleg, and Verticillium

- Danielle Chamberland

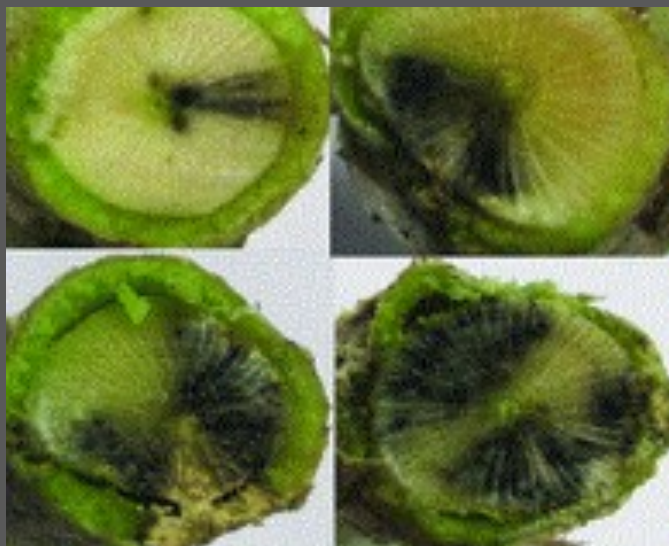
Growers seeing stem lesions or pre-mature ripening should take a closer look to identify the cause. There is a good chance it's sclerotinia. But it could also be blackleg or Verticillium.

Correctly identifying the cause of the lesions will help determine the proper management strategies for next year. Proper fungicide selection, variety selection, crop rotation intervals and weather response are different depending whether the problem is sclerotinia, blackleg, or verticillium. Here's how to tell the difference:

Sclerotinia: Look for fuzzy rot on the lower branches. The plant may look healthy at the base, but there will be dead branches. Infected branches will have white-grey tissue (not green) and will often start to shred apart. Infected stems will form sclerotia bodies (see middle photo) that will over winter in the soil.



Blackleg: Blackleg infects plants from the leaves down, so it can be identified by black and/or brown necrotic discoloration, often in pie-shaped sections with stem tissue constricted or pinched at the soil surface. It is fully black in extreme cases. This infection will eventually grow through the stem, cutting off nutrient flow.



Verticillium: This disease is new to the prairies, first identified in Manitoba in 2014. Verticillium has now been detected across the prairies. The soil-borne fungus infects roots and travels up the water-transporting xylem in the stem. It will eventually plug the xylem, cutting off the flow of nutrients.

When the crop is full height but still green, canola plants infected with verticillium stripe will often have a two-toned stem – half healthy and green and half discoloured and drying down. Leaves can show similar symptoms – healthy on one side, diseased on the other. You will not see stem or leaf striping with blackleg or sclerotinia stem rot. Sclerotinia will cause stem discoloration, but it will not stripe half the stem. Shredding and breakdown of the vascular system or inner stem (without sclerotinia causing sclerotia). Crosscut identification can be made by a greyish hue (not black) across entire cut, with a starburst pattern in earlier stages. 