Blackleg Disease Cycle
Leptosphaeria maculans

1 Spores Released
In the spring, ascospores are released from the infected stubble and infect plants through stomata and wounds.

Crop rotation allows residue to decompose, reducing the inoculum available to infect the next crop.

2 Primary Infection
Cotyledons and young leaves exhibit lesions with pycnidia. See A below.

3 Secondary Infection
The pycnidia release pycnidiospores which spread disease to other leaves and plants via rain splash and wind. Secondary infection has less impact on blackleg severity.

4 Fungal Growth Towards Stem
During mid-season flowering, infection from cotyledons/ lower leaves spreads internally to the stem base. See B below.

5 Stem Cankers and Plant Lodging
Lesions can cause root and stem cankers, which lead to lodging under severe infection. See C below.

6 Blackleg Survives on Residue
Fungus overwinters for 2+ years on infected canola stubble, primarily as mycelium pycnidia, and pseudothecia. See D below.

Symptoms of blackleg disease in canola plants:

Scouting
The main blackleg disease scouting periods are:
1 prior to planting
2 cotyledon to two-leaf stage
3 flowering stage
4 ripening stage to post-harvest

Early stages present as lesions with pycnidia (black specks) on the leaves.
The stem displays varying degrees of black, as seen in cross-section.
Late stages present with root and stem canker (shrunken, pinched areas).
Pseudothecia and pycnidia can be seen on old canola stubble.