

Early blight and brown spot in potatoes

Early blight and brown spot are considered endemic in Canada and likely exist in most potato fields, though the amount of infection can vary.

Early blight is caused by *Alternaria solani*, while brown spot is associated with *Alternaria alternata* and related species, collectively referred to as the *A. alternata* species complex.

Disease symptoms

Both fungal diseases appear as dark brown or black spots on leaves and stems.

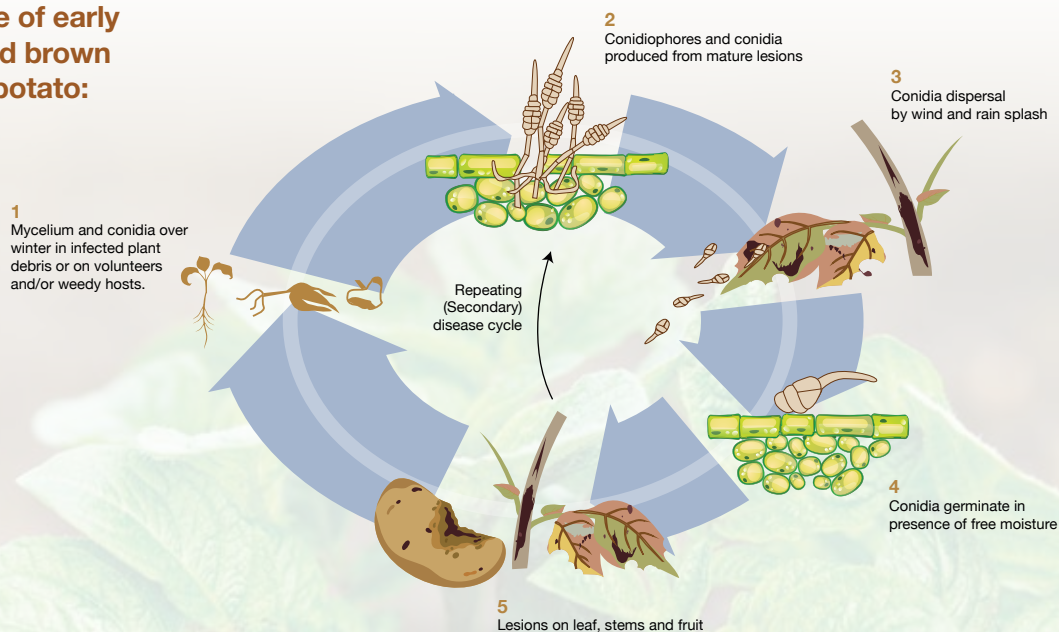
The first symptoms of these diseases will often appear on older leaves (early blight) or mid-canopy (brown spot) as small spots that expand to dark brown to black spots and often have rings like a target. Symptoms spread upward to younger leaves.

Key facts

These diseases can significantly affect yield by killing leaves, limiting growth and causing early maturity. Severe infections can leave infected tubers unmarketable. Early blight and brown spot can be especially damaging when they establish earlier in the season or on plants with poor fertility. The fungi overwinter in infected plant debris or soil and spread through wind and rain. Early blight thrives in warm, wet conditions: 20°C–30°C and moisture from dew, rain, or irrigation, while brown spot favours higher temperatures. Brown spot can occur at any time, but typically develops later in summer after rows close. Brown spot is not considered as damaging as early blight nor as aggressive.



Life cycle of early blight and brown spot on potato:



Adapted from: <https://www.apsnet.org/edcenter/pdlessons/Pages/PotatoTomato.aspx>

Stay ahead of Alternaria diseases

Managing both early blight and brown spot requires an integrated disease management strategy that reduces inoculum and minimizes plant stress.

How to manage early blight and brown spot:



Rotate crops:

Avoid planting potatoes or host crops for at least 2–3 years to reduce inoculum.



Reduce stress:

Maintain proper irrigation and fertility.



Scout early:

Check lower canopy and stressed plants first.



Apply preventively:





Use Syngenta fungicides before symptoms appear



Ensure coverage:

Get spray inside the canopy for best protection.

Syngenta solutions

Product	FRAC Group	Rate	Application notes
 Miravis [®] Duo	3 + 7	0.40 L/acre	Follow FRAC guidelines for the total number of applications in a program and do not apply Group 7 fungicides more than twice consecutively when used in mixture.*
 Aprovia [®] Top	3 + 7	0.26–0.39 L/ac	
 Quadris [®] Top	3 + 11	0.23-0.40 L/ac	Best used just before row closure for black dot activity, with early blight and brown spot activity from difenoconazole (Group 3).**
 Bravo [®] ZN	M	0.49 - 0.97 L/acre	Important mixing and/or rotational tool for single site mode of action fungicides.

* Read Proactively manage Alternaria resistance in potatoes for more information about Group 7 resistance management. <https://www.syngenta.ca/agronomy/alternaria-resistance-in-potatoes>

** There is widespread resistance by *A. solani* to Group 11 fungicides in potato growing regions in Canada. Only use Group 11 fungicides in mixture with an effective mix partner.

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