

Protecting Canola from Clubroot

Key Points

- Caused by a fungal-like microorganism, clubroot is a soil-borne disease that can cause up to 100% yield loss.
- Increasing in scope and severity, a recent study determined that approximately 10% of all canola fields in Western Canada are infected with clubroot.
- Even if the disease is not present in a field, clubroot resistant hybrids are proven to significantly reduce spore propagation or disease establishment compared to susceptible hybrids.
- The most effective strategy for protecting against clubroot pathogens is to grow a canola hybrid with built-in genetic resistance combined with a fully integrated pest management approach.

Tips for proactive clubroot management

Rotate your crops

- The Canola Council of Canada recommends a minimum three-year crop rotation.
- When you utilize a one-in-three canola rotation, 90 percent of clubroot spores in the soil are broken down, so you reduce your spore loads over time.
- With a shorter rotation, high-resting spore loads increase over time, placing additional pressure on CR genetics. This increases the risk of eroding the genetic resistance the industry is developing, and it may impact the sustainability of canola as a crop.
- Prevent and minimize moving soil.
- Control host weeds and volunteer canola.
- Scout for signs of clubroot and look for virulence shift.
- Practice patch management.
- Control pH levels in soil with liming.

Rotate your genetics

- CR1 (1st generation clubroot resistance) remains an excellent option in fields that have never seen clubroot and where CR genetics have not been used before.
- Growers who have been using CR1 should consider rotating to alternative clubroot resistant sources. Just as we encourage early deployment of resistance in areas where clubroot might not already be, a proactive approach is the best option here as well.
- Given that keeping spore loads low is key to managing clubroot, there is no reason to wait for CR1 or 1st generation resistance to breakdown before rotating genetics.
- If clubroot has been identified on your land or close by, the goal should be to not grow the same clubroot-resistance genes more than once consecutively.
- Pioneer offers a portfolio of CR hybrids with different sources and combinations of resistance gene stacks.



Clubroot galls on a canola root.

Agronomic considerations

Pioneer Protector® brand canola is adaptable across Western Canada and delivers high-yielding canola hybrids with very good standability.

- Many of our canola hybrids contain consistent, multi-race clubroot resistance.
- They provide a high level of resistance to the most prevalent race of clubroot (race 3H) and resistance to other races 2F, 5I, 6M and 8N. Plus, the emerging virulent pathotypes 3A, 3D, 2B and 5X.

Have questions on this or other canola related topics? Contact your local Pioneer Sales Representative.