THE BASF CANOLA DISEASE MANAGEMENT GUIDE.

Your pocket guide to healthier canola and increased yield potential.
Canola production can be rewarding but it also comes with several challenges throughout the season. Whether it’s determining the right combination of best management practices or minimizing risk to maximize yield and return on investment. At BASF our goal is to help you overcome these risks and challenges by providing innovative solutions and technical advice.

This pocket guide outlines some of the key canola diseases in Western Canada. Inside you’ll find useful tips and facts including disease identification, best management practices, control options and details on proper application timing to help bring you increased yield potential.
Blackleg is increasing in both incidence and prevalence across all regions of Western Canada as canola rotations continue to tighten and the disease continues to show signs of adaptation. Infection can result in reduced nutrient uptake by the plant leading to premature plant death, increased lodging and yield loss. Relying on the use of resistant varieties alone is no longer enough to manage the disease and should instead be managed with an integrated approach.

Source: http://www.canolacouncil.org/canola-encyclopedia/diseases/blackleg/
WHAT TO LOOK FOR.

Round to irregular shaped, greyish-white leaf lesions, usually dotted with black pycnidia.

Stem lesions often form dry, sunken cankers with black borders.
BEST MANAGEMENT PRACTICES.
When dealing with blackleg it’s important not to rely on a single management method and instead to incorporate an integrated approach.

**Scout for disease.**
Prior to planting, at the vegetative stage, at or just after swathing (best time).

**Use resistant varieties.**
Resistant varieties reduce infection to specific races of blackleg.

**Rotate crops.**
1-in-4-year canola rotation is recommended.

**Rotate varieties.**
Rotating genetics helps to reduce selection pressure.

**Control weeds and volunteers.**
Weeds can be a host/source of blackleg inoculum.

**Use a fungicide.**
Apply an early season fungicide at the 2 to 6 leaf stage with your canola herbicide application.
DON’T LET IT SLIP UNDER THE RADAR. SCOUT FOR BLACKLEG.

Prior to planting – examine canola residue to see if pseudothecia (small fruiting bodies) are present.

Vegetative stage (2 to 6 leaf) – look for early symptoms of leaf lesions on the leaves and cotyledons. If lesions are easily identifiable, there is a higher risk for disease development.

At or just after swathing is the best time to scout for disease – 20-25 canola plants should be collected from 5 locations within the field and cut at the point where the stem meets the soil. Examine for the presence of blackened tissue.

Priaxor® Fungicide

GET A MORE ADVANCED FUNGICIDE FOR MORE ADVANCED RESULTS.

The advanced chemistry in Priaxor® fungicide delivers more consistent and continuous control of blackleg. Tank mixed with your in-crop herbicide, it helps maximize your canola crop’s yield potential thanks to:

The unique mobility of the active ingredient Xemium®.

The proven benefits of AgCelence®.

Multiple modes of action.

BLACKLEG
TO COMPETE WITH BLACKLEG, YOU HAVE TO BE ON TIME.

For effective blackleg control spray Priaxor at the 2 to 6 leaf stage with earlier applications being most effective. Apply at a rate of 90 to 120 ml/ac (225 to 300 ml/ha). Each case treats 160 to 210 acres depending on rate, where the higher rate is recommended for high disease pressure.
Sclerotinia is increasing due to the wetter weather patterns and tightened rotations between host crops. In Western Canada, sclerotia levels are high enough to cause significant infection, especially under moist conditions. Sclerotinia infection can lead to substantial financial and yield losses. You can estimate yield loss percentage in your fields by multiplying % infection by 0.5.
WHAT TO LOOK FOR.

Premature ripening and pale-grey or white lesions on stems, branches and pods.

Sclerotia within the stems, branches and pods.

Severely infected crops that frequently lodge and shatter at swathing.
BEST MANAGEMENT PRACTICES.

Monitor moisture levels.
Frequently monitor your fields for high moisture levels, as disease incidence increases as soil moisture increases.

Scout for disease.
Look for apothecia in June. Apothecia appear at or near the soil surface and look like little golf tees.

Select tolerant varieties.
Choose cultivars with tolerance to sclerotinia to reduce lodging.

Record keeping.
Keep track of moisture levels and disease incidence.

Rotate crops.
1-in-4-year minimum rotation between susceptible crops.

Use a fungicide.
Preventatively apply a fungicide during the 20 to 50% flowering stage.
BETTER SCLEROTINIA CONTROL EQUALS HIGHER YIELDS.

Lance® fungicide is the market standard for proven and proactive sclerotinia control, leading to increased yield potential, decreased lodging and a more efficient harvest.

Lance AG is a premium fungicide option that delivers increased and more consistent yield improvements and protection during the critical flowering period. All for improved disease control¹ and better stress management due to the unique benefits² of AgCelence.

Source: AgSolutions® Performance Trial, Cardiff, AB, 2010
THE APPLICATION WINDOW ONLY STAYS OPEN FOR SO LONG.

Both Lance and Lance AG should be applied preventatively at 20 to 50% flowering to protect the plant and prevent yield loss during the latency period between infection and visible symptoms.

For Lance, apply at the 40 acres per case rate, and for Lance AG, apply at the 50 acres per case rate.

20% FLOWERING (14-16 OPEN FLOWERS ON MAIN STEM)

50% FLOWERING (30 OPEN FLOWERS ON MAIN STEM)
This is a serious soil-borne disease of canola. There are currently no economical measures you can take to remove the disease from a canola field once it has been infested. It is possible however to impede the spread and reduce the severity of infection.
WHAT TO LOOK FOR.

Infected plants become malformed and develop galls on the roots, ranging from tiny nodules to large club-shaped outgrowths.

Galls are firm and white but become soft and greyish-brown as they mature and decay.

Wilting, stunting and yellowing of plants.

Premature ripening of the plant and shriveling of the seeds.
BEST MANAGEMENT PRACTICES.

Sanitation.
Practice good sanitation to restrict the movement of contaminated material.

Use resistant varieties.
Use clubroot-resistant varieties in infected fields as well as non-infected fields to keep inoculum levels at a minimum.

Control weeds and volunteers.
Weeds can serve as hosts for clubroot in non-canola years.

Limit tillage.
Use soil conservation practices to reduce transportation of resting spores.

Monitor moisture levels.
Frequently monitor your fields for high moisture levels.

Rotate crops.
1-in-4-year canola rotation is recommended with a clubroot-resistant variety.

Scout crops regularly and carefully.
Assess the field as a whole and look for patches of crop demonstrating wilting, premature ripening or stress symptoms.

Dig up plants at or after swathing to check for gall formations on the roots.
ALTERNARIA

This is a disease caused by several different species of fungi. Alternaria is found every year in Western Canada, however the disease varies considerably from year to year and can also vary depending on the area, moisture levels and temperature.
WHAT TO LOOK FOR.

**Early season:**

Seedlings with small light brown lesions on the cotyledons that eventually turn black.

Initial infection on lower leaves develop brown to blackish, target-like lesions, surrounded by yellow halos.

Mature leaf lesions may be entirely grey, grey with a purplish or black border, or entirely black.

**Mid-late season:**

Stem and pod lesions start as small brown or black dots that elongate and expand into black or dark-bordered lesions with greyish-white centres.

Infected pods may ripen prematurely and shatter while the crop is standing or in swath.
BEST MANAGEMENT PRACTICES.

Rotate crops.
Follow a minimum three-year canola rotation.

Choose the right variety.
Some varieties are less susceptible than others, e.g. *Brassica napus*.

Control weeds and volunteers.
Weeds can serve as hosts for the fungus.

Reduce tillage.
Buried stubble cannot release spores.

Use a fungicide.
Apply a foliar fungicide at 20 to 50% flowering for suppression or at 95% flowering for control.
For more information on disease management in canola, Priaxor, Lance or Lance AG fungicides please visit agsolutions.ca or contact AgSolutions Customer Care at 1-877-371-BASF (2273).

Always read and follow label directions.

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