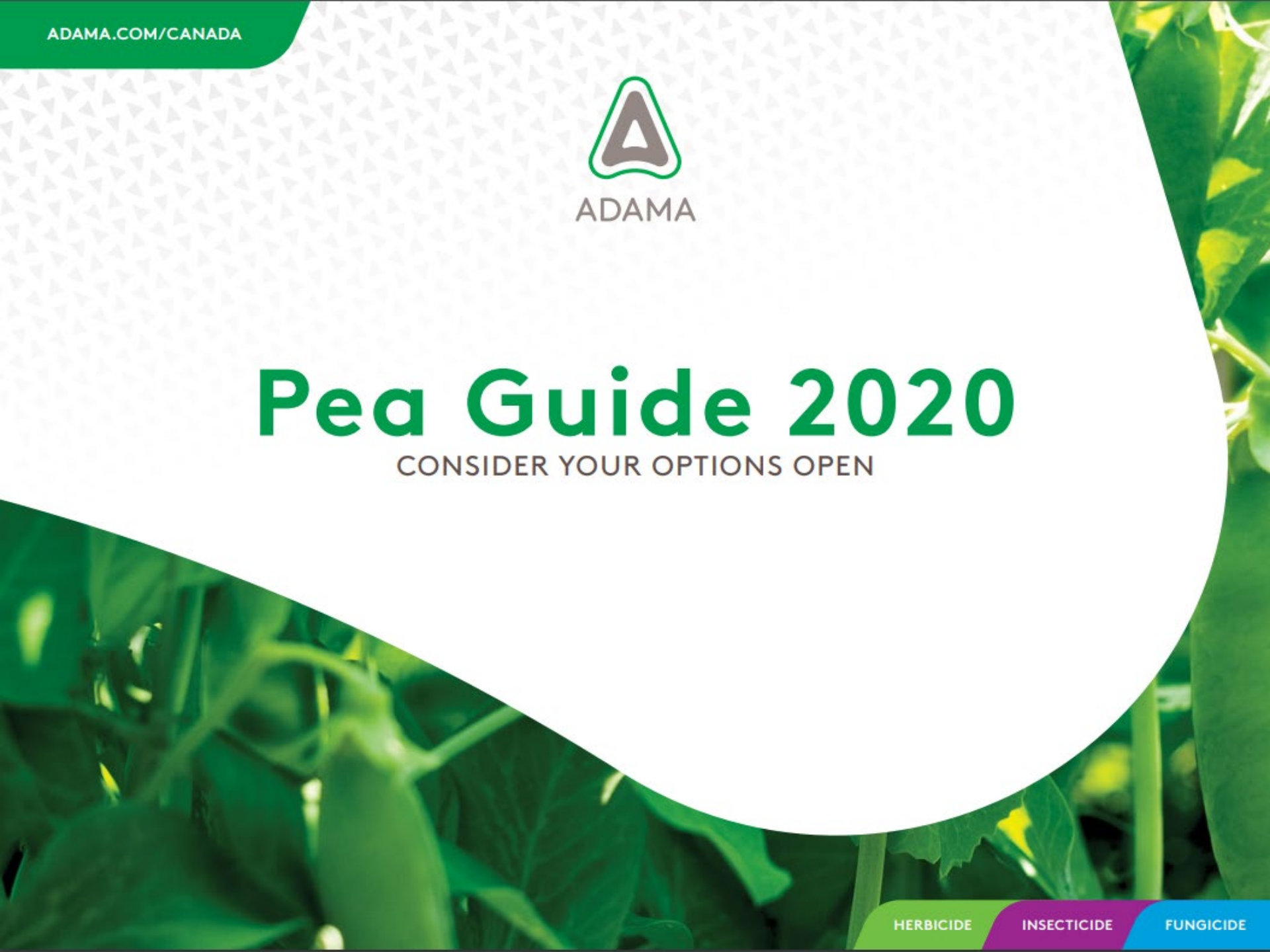
ADAMA.COM/CANADA

ADAMA

# Pea Guide 2020

## CONSIDER YOUR OPTIONS OPEN



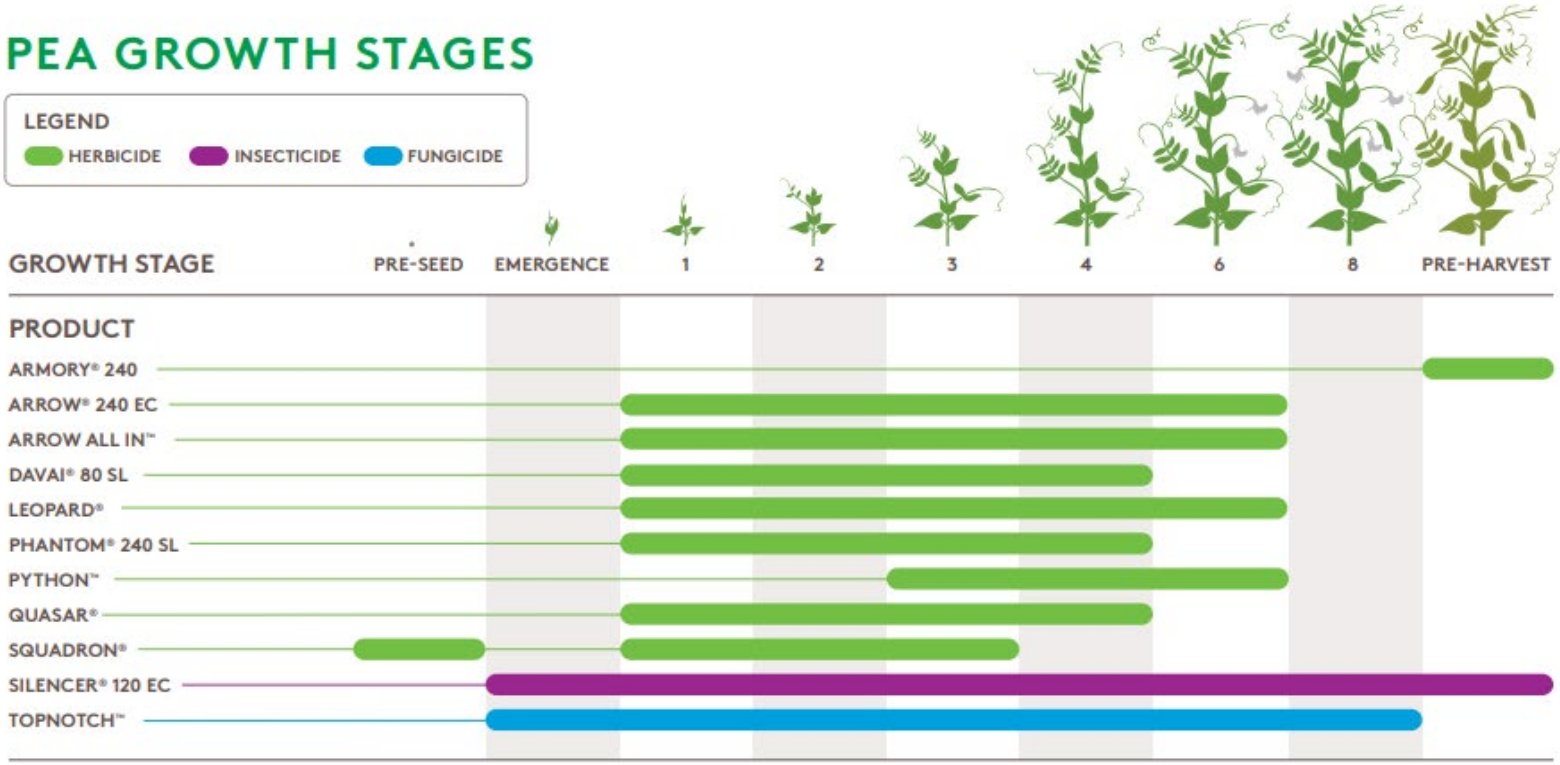
HERBICIDE INSECTICIDE FUNGICIDE

ADAMA

For over two decades, Canadian pea growers looking for crop protection solutions haven't had much of a choice. So we're shaking things up.

Why? Because we know that every field and every season presents their own unique challenges. And Canadian growers deserve more than a one-size-fits-all approach. In addition, we're proud to offer our full portfolio of herbicides, fungicides and insecticides to help you protect your peas all season long. Our management solutions are as unique as your field, offering customizable options formulated to help you get the most out of your pea acres, with no strings attached. That's right — no more deciphering complicated programs or bundling products you want with products you don't. Just effective, easy-to-use products to help you solve your biggest challenges from seeding to harvest.

## PEA GROWTH STAGES



# HERBICIDE DECISION TREE

**Growing Peas, Soybeans or Dry Beans**

**Perennial Grasses**
LEOPARD® (quizalafop) is easily tank-mixable with any of our solutions

**Annual Grasses**
ARROW ALL IN® (clethodim) is easily tank-mixable with any of our solutions

**Low Grass Pressure**

**High Grass Pressure**

**Wheat, Barley, Peas or Lentils are next year's crop**

**Flexibility to grow Canola (all varieties), Corn, Flax, Oats as well as Wheat, Barley, Peas or Lentils the following year.**

**Extended Flushing Control (all soil zones)**

**Extended Flushing Control (black soil zones)**

**Multiple modes of Action**

**QUASAR®**

**PHANTOM® 240 SL**

**PYTHON™**

**DAVAI® 80 SL**

## BROADLEAF WEEDS CONTROLLED BY PRODUCT

| Product Name | Weed Stage at Application | Chickweed | Cleavers | Cow cockle | Flixweed | Green smartweed | Hemp-nettle | Kochia | Lamb's-quarters | Redroot pigweed | Russian thistle | Shepherd's purse | Stinkweed | Stork's bill | Tartary buckwheat | Volunteer canola | Wild buckwheat* | Wild mustard |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAVAI® 80 SL | cotyledon to 4 leaf | – | S | C | C | C | – | – | C | C | – | C | C | C | – | C[4] | S | C |
| DAVAI® 80 SL + ARROW ALL IN™ | cotyledon to 4 leaf | – | S | C | C | C | – | – | C | C | – | C | C | C | – | C[4] | S | C |
| DAVAI® 80 SL + LEOPARD® | cotyledon to 4 leaf | – | S | C | C | C | – | – | C | C | – | C | C | C | – | C[4] | S | C |
| PHANTOM® 240 SL | cotyledon to 4 leaf | C | C | – | – | C | C | – | – | C | – | C | C | – | – | C[4] | S | C |
| PHANTOM® 240 SL + ARROW ALL IN™ | cotyledon to 4 leaf | C | C | – | – | C | C | – | – | C | – | C | C | – | – | C[4] | S | C |
| PHANTOM® 240 SL + LEOPARD® | cotyledon to 4 leaf | C | C | – | – | C | C | – | – | C | – | C | C | – | – | C | S | C |
| QUASAR® | cotyledon to 4 leaf | C | – | – | – | C | – | – | C | C | – | – | C | – | – | S | S | C |
| QUASAR® + ARROW ALL IN™ | cotyledon to 4 leaf | C | – | – | – | C | – | – | C | C | – | – | C | – | – | S | S | C |
| QUASAR® + LEOPARD® | cotyledon to 4 leaf | C | – | – | – | C | – | – | C | C | – | – | C | – | – | S | S | C |
| PYTHON™ | cotyledon to 4 leaf | – | S | C | C | C | – | – | C | C | – | C | C | C | – | C | C | C |
| SQUADRON® | | C | – | C[6,7] | – | C | C | C[7] | C | C[6,7] | C[6] | C[6,7] | C | – | C | C[5] | C[6,7] | C[6,7] |

[C] control | [S] suppression | [1] 2-5 leaf stage | [2] 3 leaf to 4 leaf + 3 tillers | [3] 1-5 leaf up to 2 tillers | [4] non-Clearfield® varieties only [5] non-triazine tolerant canola only
[6] preplant incorporated with Treflan® Liquid EC herbicide | [7] preplant incorporated with Rival® EC herbicide

## GRASSY WEEDS CONTROLLED BY PRODUCT

| Product Name | Weed Stage at Application | Barnyard grass | Crabgrass | Downy brome | Fall panicum | Foxtail barley | Green foxtail | Japanese brome grass | Witch grass | Persian darnel | Proso millet | Quackgrass | Volunteer barley | Volunteer canary seed | Volunteer corn | Volunteer durum wheat | Volunteer tame oats | Volunteer wheat | Wild oats | Yellow foxtail |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAVAI® 80 SL | 1-4 true leaf | C | – | – | – | – | C | S | – | C | – | – | C | C | – | C | C | C | C | C |
| DAVAI® 80 SL + ARROW ALL IN™ | 1-6 true leaf | C | C | – | C | – | C | – | C | C | C | S | C | C | C | C | C | C | C | C |
| DAVAI® 80 SL + LEOPARD® | 2 leaf to early tillering | C | – | C[1] | C | C[2] | C | C[1] | C | – | C | S | C | – | C | C | C | C | C[3] | C |
| PHANTOM® 240 SL | 1-4 true leaf | – | – | – | – | – | C | – | – | – | – | – | – | – | – | – | – | – | C | – |
| PHANTOM® 240 SL + ARROW ALL IN™ | 1-6 true leaf | C | C | – | C | – | C | – | C | C | C | S | C | C | C | C | C | C | C | C |
| PHANTOM® 240 SL + LEOPARD® | 2 leaf to early tillering | C | – | C[1] | C | C[2] | C | C[1] | C | – | C | S | C | – | C | C | C | C | C[3] | C |
| QUASAR® | 1-4 true leaf | S | – | – | – | – | C | – | – | – | – | – | S | – | – | – | C | – | C | C |
| QUASAR® + ARROW ALL IN™ | 1-6 true leaf | C | C | – | C | – | C | – | C | C | C | S | C | C | C | C | C | C | C | C |
| QUASAR® + LEOPARD® | 2 leaf to early tillering | C | – | C[1] | C | C[2] | C | C[1] | C | – | C | S | C | – | C | C | C | C | C[3] | C |
| PYTHON™ | 1-4 true leaf | C | – | – | – | – | C | S | – | C | – | – | C | C | – | C | C | C | C | C |
| SQUADRON® | | C[6,7] | – | C[6,7] | – | – | C[6,7] | – | – | C[6,7] | – | – | – | – | – | – | – | – | C[6,7] | C[6,7] |

[C] control | [S] suppression | [1] 2-5 leaf stage | [2] 3 leaf to 4 leaf + 3 tillers | [3] 1-5 leaf up to 2 tillers | [4] non-Clearfield® varieties only [5] non-triazine tolerant canola only
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INSECTICIDE

# SILENCER® 120 EC

**SILENCER® 120 EC controls pea aphid, pea leaf weevil, cutworm and grasshoppers in your peas.**


**ACTIVE INGREDIENT:**
Lambda-cyhalothrin

**CHEMISTRY GROUP:**
Group 3

**APPLICATION RATES AND PACKAGING:**
- 17 – 51 ml/ac or 220 – 74 ac/3.785 L jug; consult the label for specific application rates
- 4 x 3.785 L jugs/case

**REGISTERED PULSE CROPS:**
- Beans
- Chickpeas
- Lentils
- Peas
- Soybeans

SILENCER® 120 EC is registered for use on more than 30 crops; refer to the label for more information.

**HOW IT WORKS:**
Fast-acting stomach and contact insecticide.

**WATER VOLUME:**
Ground: 40 – 80 L/ac
Aerial: 4 – 16 L/ac

**PRE-HARVEST INTERVAL FOR PULSE CROPS:**
21 days

**GRAZING RESTRICTIONS:**
Do not graze livestock within 3 days of application.

# PESTS

Here are a few of the most dangerous insects to peas

## PEA APHID

**Rate:** 33-93mL/ac

**Application Method:** Ground or Aerial

**Timing:** Use higher rate when conditions favour rapid population increases.

Photo: CC BY SA 3.0 Image courtesy of Andreas Eichler

## PEA LEAF WEEVIL

**Rate:** 33mL/ac

**Application Method:** Ground or Aerial

**Timing:** Make the first application after emergence but prior to the 5 to 6 node stage. Apply while the adults are still present on the plants, before egg laying begins.

Photo: © entomart

## CUTWORM

**Rate:** 33mL/ac

**Application Method:** Ground or Aerial

**Timing:** Cutworm activity is greatest during the late evening and night. Application should be timed as close as possible to insect feeding activity

Photo: Public Domain

## GRASSHOPPER

**Rate:** 33mL/ac

**Application Method:** Ground or Aerial

**Timing:** The need and timing of application should be based on the presence of vulnerable pest developmental stages and significant populations as determine by local monitoring.

Photo: CC BY 2.0 Image courtesy of Mike Bowler

FUNGICIDE

# TOPNOTCH™

**A new broad spectrum, multi-mode of action option for control of dangerous diseases in pulses as well as cereal leaf diseases.**


## ACTIVE INGREDIENTS:

Azoxystrobin and propiconazole

## CHEMISTRY GROUPS:

Group 3 (propiconazole) and Group 11 (azoxystrobin)

## APPLICATION RATES AND PACKAGING:

- 2 x 8.6 L jugs/case

## KEY BENEFITS:

- Multiple modes of action for resistance management
- Curative and preventative systemic action
- Can use on multiple crops, with exceptional crop safety
- Registered for both ground and aerial spraying

## REGISTERED AND SUPPORTED CROPS:

- Barley
- Edible beans
- Peas
- Lentils
- Oats
- Rye
- Soybeans
- Triticale
- Wheat

## KEY DISEASES CONTROLLED IN PEAS:

- Anthracnose
- Ascochyta blight
- Mycosphaerella blight
- Powdery mildew
- White mould*

## LEAF DISEASES CONTROLLED IN CEREALS:

- Barley leaf rust
- Net and spot blotches
- Scald
- Septoria spot
- Stripe rust
- Tan spot
- Wheat leaf rust

*Suppression

## HOW IT WORKS:

Used as both a curative and preventative fungicide, TOPNOTCH™ has broad-spectrum, systemic and contact activity.

## APPLICATION TIMING AND CROP STAGING:

| Crop | Diseases | Application Timing | Rate |
|---|---|---|---|
| Beans, Peas, Lentils, Soybeans | Mycosphaerella blight, Anthracnose | Make the first application at the first sign of disease. Apply the high rate only under conditions of high disease pressures. A second application 14 days later may be needed if conditions persist. Good spray coverage and canopy penetration are important for best results. | 0.31–0.62 L/ac |
| | Powdery mildew, White mould (suppression only) | | 0.31 L/ac |

See label for additional crop information

## WATER VOLUME:

Ground: minimum 40 L/ac or 10 gal/ac  Aerial: minimum 20 L/ac or 5 gal/ac

## PRE-HARVEST INTERVALS:

- Cereals: 45 days
- Peas, beans & soybeans: 15 days
- Lentils: 30 days

## GRAZING RESTRICTIONS:

No restrictions.

# DISEASES

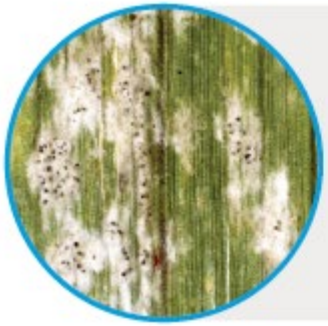
These moulds and mildews could put your pea crops at risk

## MYCOSPHAERELLA BLIGHT:

**Damage:** The pathogen produces irregular purple spots on leaves, stems, flowers and pods. These spots enlarge and coalesce, drying the tissues and causing blossom drop, stem blight and foot rot. Infected pods may produce infected seeds that are shrunken and discoloured. The impact on yield depends on the timing of the initial infection and weather conditions. When infections originate within the same field, disease can develop early, increasing the likelihood of damage. When initial infections occurs at the base of the plant, foot rot can occur, causing premature lodging and death of plant.

**Life Cycle:** Infections originate from the soil, stubble, or seed borne inoculum.

Photo: CC by SA 4.0 Image courtesy Paketchinna



## POWDERY MILDEW

**Damage:** The pathogen causes white powdery spots, composed of conidia and mycelium, on lower leaves and stems. Severely affected crops become covered in a white mat of powdery spores. Infection can result in reduced yields, delayed maturity and reduced uptake of desiccants.

**Life Cycle:** Infection of pea crops usually begins at bloom (mid July) and continues well into the summer. Once the disease is present in a field, conidia produced in infected tissues can cause continued spread of the disease throughout the growing season.

Photo: CC BY 3.0 Image courtesy Clemson University

## WHITE MOULD

**Damage:** The pathogen that causes white mould is the same pathogen that causes white mould on other broadleaf crops (canola, dry edible beans, soybeans, sunflower, etc...). Lesions and white fluffy mould can occur on all above ground plant parts. Lesions being as water-soaked spots but take on the characteristic white, bleached color as they age. White fluffy growth may occur on lesions, particularly when canopies are wet for long periods of time.

**Life Cycle:** The pathogen overwinters in the mouse-dropping size black fungal structures (sclerotia) at the end of the season. When adequate rain occurs in the spring and the soil is saturated (or near saturated), these sclerotia produce small mushrooms (apothecia) that release airborne spores. The infection process begins when spores land on flower petals, begin to digest them, and the subsequent fungal growth moves into healthy tissue. Consequently, peas are not at risk for infection until bloom begins. For infection to occur, the soils must be wet enough to produce the small mushrooms 1-2 weeks before bloom. White mould is very dependent on cool and wet conditions for disease to develop.

Photo: Courtesy of Canola Council of Canada

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1.855.264.6262

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