**Winter Canola Producer’s Scouting Guide**

### Insect Control

- Insects known to attack canola include flea beetles, grasshoppers, cutworms, aphids, sugar beet rust fly and maggots.
- Registered fertilizer and seed treatment insecticides include bifenthrin, chlorpyrifos, spinosad, lambda cyhalothrin, and thiamethoxam.
- Great of the time, winter canola will recover from insect infestations if the insecticide applications are made at the economic thresholds determined by scouting and sampling.
- Select insecticides carefully and consider options that would protect pollinating insects and natural enemies in general, such as predators and parasites.
- Cultural practices such as seed rotation, controlling volunteer canola and wild mustard, and incorporating plant residue into the soil are important insect-management tools.

#### Key Insect Pests

- **Aphids** feeding on pods.
- **Diamondback moth larvae** shot holes in leaves.
- **False chinch bug.**

### Disease Control

- **Diseases can attack canola at all stages of growth.**
- **Disease** can be caused by seedborne, seedlingborne or airborne spread from infected crop residues.
- Blackleg is the most severe disease for winter canola. It survives in infected seed, infected canola stubble and certain weeds.
- Several seed treatment products are registered for control of blackleg, including thiram, carbendazim, chlorothalonil, thiophan, and metalaxil.
- The most important management method to control blackleg is to exclude it from the field by planting only disease-free seed treated with a fungicide that is effective against blackleg.
- Alternative seed treatments and fungicides that can be used for blackleg control.
- Pseudomonas fluorescens – is a foliar fungicide that is effective against blackleg.

#### Key Diseases

- **Blackleg on leaf**
- **Blackleg on stem**
- **Sclerotinia on leaf**
- **Sclerotinia black spot on leaf**

### Freeze Damage

- **Freeze damage.**
- **Freeze damage close-up.**

### Improper Balance of pH on Canola Plants

- **Effects of pH on canola.**
- **Effects of pH on canola.**

### Roundup Damage on Non RR Canola

- **Roundup damage on non RR canola.**

### Winter Canola Harvest

- **Harvest** canola under seed pods to avoid excess trash and green stems moving through the combine and slowing harvest.
- **Push** winter canola at 35 percent to 60 percent color change, similar to swathing timing.
- **Harvest** with a header that matches the pusher width.
- **Pushing or swathng too early can impact test weight and oil content.**

### Tips for Calibrating Your Combine for Winter Canola

- Adjust initial combine settings in accordance with the operator’s manual instructions for canola (rapeseed).
- Harvest canola immediately under seed pods to avoid excess trash and green stems moving through the combine and slowing harvest.
- Match the reel speed to the ground speed.
- Slow the cylinder speed to approximately one-half to two-thirds of the setting for most cereals (450 to 650 rpm).

### Key Insect Pests

- **Aphids in Canola.**
- **Harliquin bug Lygus MB.**
- **Diamondback moth larva.**

### Key Diseases

- **Alternaria black spot on leaf**
- **Alternaria black spot on stem**
- **Sclerotinia in the stem**
- **Sclerotinia on leaf**
- **Sclerotinia in the stem**
- **Sclerotinia on leaf**

### Freeze Damage Close-Up

- **Freeze damage close-up.**

### Improper Balance of pH on Canola Plants

- **Improper balance of pH on canola.**

### Roundup Damage on Non RR Canola

- **Roundup damage on non RR canola.**

### Winter Canola Harvest

- **Can be straight combined, swathled or pushed.**
- **Some equipment used for wheat can be used to harvest canola.**
- **Combines require some modification to handle smaller canola seed.**
- **Harvest** canola when average seed moisture is 8 percent to 10 percent and no green pods are visible.
- **Swathing is especially effective for fields with uneven maturity.**
- **Once canola is swathled, it can be left in windrows on the stubble for 7 to 10 days, or until seed moisture is 9 percent to 10 percent.**
- **The swathled canola can be picked up by the combines.**
- **Push** winter canola at 35 percent to 60 percent color change, similar to swathing timing.
- **Harvest with a header that matches the pusher width.**
- **Pushing or swathng too early can impact test weight and oil content.**
Eight Great Reasons to Plant Winter Canola

- Easy to grow and manage, much like winter wheat.
- Premium crop.
- Strong regional market channels and opportunities.
- Wheat yields and quality are improved by rotation with DEKALB® Genetically Engineered Roundup Ready® winter canola.
- Improved control of feral rye, perennials and other key weeds that affect wheat production.
- Development and availability of Sulfonylurea Resistant Tolerant (SURT™) technology that reduces concern of sulfonylurea (SU) herbicide carryover from wheat.
- Improved winter canola damaged by SU herbicide tank contamination.
- Rollers can be used with or after the last tillage operation.
- Make each tillage operation shallower than the previous one.
- Soilbeds that are too course can result in poor seed placement and crusting.

Planting

Important Criteria for Selecting a Winter Canola Variety

- Winter survival.
- Yield potential.
- Seed oil content.
- Pod-shattering resistance.
- Lodging tolerance.
- Disease resistance.
- Relative maturity.
- Herbicide tolerance such as the Genetically Engineered Roundup Ready trait.
- Weed management.

Budding and bolting
- Begins with the opening of the lowest bud on the main stem and continues upward, with 3 to 5 or more flowers opening each day. Flowering of the main stem continues for 2 to 4 weeks. Fall plant height is reached by peak flowering.

Maturing and ripening
- Begins as the last flowers fade from the main stem. Seed weight increases and is complete approximately 35 to 45 days after flowering. Average seed moisture of 10 percent with no green seed visible is ideal for harvest.

Winter Canola Growth Stages

- Seedling – emerges 4 to 6 days after planting. The growing point of canola is above the soil between the two cotyledons.
- Rosette – the plant establishes a rosette 4 to 8 days after emergence. The rosette features larger, older leaves at the base and smaller, newer leaves at the center.
- Budding and bolting – a cluster of flower buds becomes visible at the center of the rosette and rises as the stem bolts or lengthens. Leaves attached to the main stem unfurl. The cluster of flower buds enlarge as the main stem elongates.
- Flowering – begins with the opening of the lowest bud on the main stem and continues upward, with 3 to 5 or more flowers opening each day. Flowering of the main stem continues for 2 to 4 weeks. Fall plant height is reached by peak flowering.
- Maturing and ripening – begins as the last flowers fade from the main stem. Seed weight increases and is complete approximately 35 to 45 days after flowering. Average seed moisture of 10 percent with no green seed visible is ideal for harvest.
- Proper Seeding
- Rolling
- Anthesis
- Pollination
- Harvest

Proper Seedbed Preparation

- Level, firm seedbed.
- Seeds that are too fine or overworked are prone to moisture loss and crusting.
- Seeds that are too coarse can result in poor seed placement and seed-to-soil contact.
- Make each tillage operation shallower than the previous one.
- Complete the last tillage operation less than one week prior to planting.
- Rillers can be used with or after the last tillage operation.

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SURT Products

- Sulfonylurea Resistant Tolerant (SURT) winter canola products reduce the risk of crop injury to winter canola from carryover of SU herbicides.
- DEKALB is a seed industry leader in SURT technology.
- Genuity® Roundup Ready® winter canola.
- DEKALB is a seed industry leader in SURT technology.
- SURT winter canola products can be grown following wheat that has been treated with some types of SU herbicides.
- Canola plant-back restrictions may not always be listed on the herbicide label.
- Sector canola plant-back restrictions may not always be listed on the herbicide label.

Fertilization

- Cultivates both surface and profile soil samples.
- Analyzes for pH and lime requirements, plant-available phosphorus and potassium.
- Soil profile samples for nitrogen should be taken to a depth of 2 feet.
- A profile sulfur test is recommended.
- Canola requires slightly more nitrogen and sulfur than does wheat.
- Avail high-nitrogen applications in the fall before planting.
- Only a third of total nitrogen for canola (roughly 30 to 50 pounds per acre) should be applied prior to planting.
- Avoid high-nitrogen applications in the fall before planting.
- Canola requires slightly more nitrogen and sulfur than does wheat.
- Soil profile samples for nitrogen should be taken to a depth of 2 feet.
- Apply up to 22 ounces of Roundup agricultural herbicide in up to two applications no less than 60 days apart.
- Planting canola following the application of most sulfonylurea and imidazolinone herbicides should be avoided.
- Weed control before seeding can be achieved with tillage, herbicides or both.
- Planting into a weed-free seedbed is essential.
- The Genuity® Roundup Ready system provides nonselective control of winter annual grasses and broadleaf weeds, including blue mustard, field dandelion, wild mustard, tumble mustard, field dandelion, pennycress and shepherd’s purse.
- Apply up to 22 ounces of Roundup agricultural herbicide at up to two applications no less than 60 days apart.
- The first application is best within 30 to 45 days of planting in the fall prior to canopy closure.
- The second application should be done in the spring after leaf desiccation and prior to bolting.

Weed Management

- Planting into a weed-free seedbed is essential.
- Weed control before seeding can be achieved with tillage, herbicides or both.
- It is critical to control volunteer canola and cool-season winter annual grasses when planting winter canola after wheat.
- Attention must be given to herbicide applications made to preceding crops.
- Planting canola following the application of most sulfonylurea and imidazolinone herbicides should be avoided.
- Conventional herbicides currently registered for use in winter canola include trifluralin, ethalfluralin, quizalofop, sethoxydim or clodhexis.
- Roundup® branded agricultural herbicides can be applied over the top of Genetically Engineered Roundup Ready winter canola.
- The Genetically Engineered Roundup Ready system provides nonselective control of winter annual grasses and broadleaf weeds, including blue mustard, field dandelion, wild mustard, tumble mustard, field dandelion, pennycress and shepherd’s purse.
- Apply up to 22 ounces of Roundup agricultural herbicide at up to two applications no less than 60 days apart.
- The first application is best within 30 to 45 days of planting in the fall prior to canopy closure.
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Winter Canola Damaged by SU Herbicide Tank Contamination.