

EARLY WEED CONTROL IS KEY

In this factsheet, we'll explore key corn production challenges and outline how DuPont Crop Protection products deliver solutions.

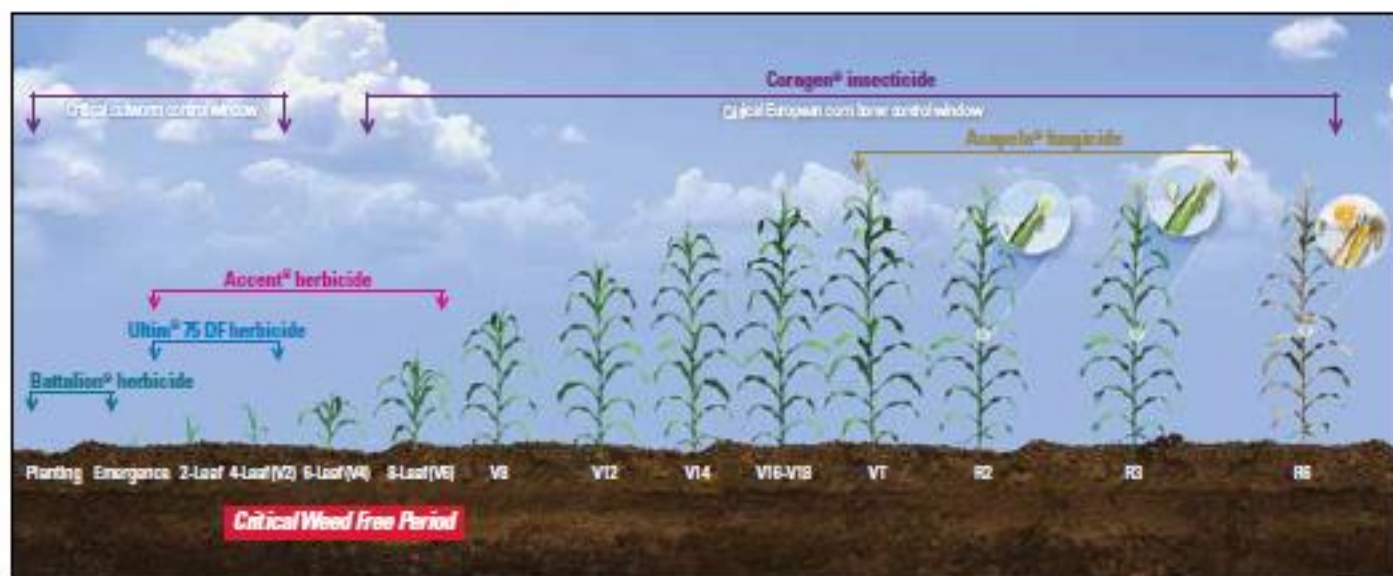
Weeds affect corn yields in a variety of ways. Weeds compete with your corn for water and nutrients, which is especially harmful if the crop is under stress or weed density is high. High weed densities can devastate yields by as much as 20 bu./ac. to 40 bu./ac.

Research also shows that corn may be able to detect light reflected by the weeds. This causes the crop to adjust its growth patterns to make it more competitive with weeds, which can also hurt crop yields.

It is essential to keep your corn weed-free during the 3- to 8-leaf stage of growth. This is known as the Critical Weed-Free Period (CWFP). The CWFP is influenced by weed density, the timing of weed emergence relative to crop emergence and whether the weed is a broadleaf or a grass.

The denser the weeds and the earlier they emerge in relation to the crop, the earlier the onset of the CWFP. Here you see the growth stages of the crop and when it is most vulnerable to weed challenges.

DuPont Crop Protection has built a lineup of products that allow you to protect your corn from pests when it matters most.



Challenge: Pre-Emergence and In-crop weed control Solution: DuPont™ Battalion® herbicide (Red River Valley only)

DuPont™ Battalion® gives glyphosate-tolerant corn a head start on a cleaner field and higher yields. Battalion® is flexible. It controls both broadleaf and grassy weeds and provides up to 3 weeks of residual control when applied pre-emergent.

Battalion® provides more effective control than glyphosate alone, and removes the early weed competition that robs the corn crop of critical nutrients and moisture.

Pre-Emergent Rate: 20 acres/case

Post-Emergent Rate: 24 acres/case. Apply from spike to 3rd leaf stage.

DuPont™ Battalion® contains group 2 and 4 herbicides. Please consult your seed supplier before making post-emergent herbicide applications.



Challenge: In-crop weed control Solution: DuPont™ Ultim® 75 DF herbicide (Manitoba only)

DuPont™ Ultim® 75 DF delivers proven control of grass and broadleaf weeds such as **wild oats, green foxtail, yellow foxtail, barnyard grass, volunteer cereals, quackgrass, redroot pigweed.**

Application Timing: Apply when corn is in the 1-4 leaf stage

Rate: 10 acres/pouch.

DuPont™ Ultim® 75 DF is a group 2 herbicide. Please consult your seed supplier before making post-emergent herbicide applications.

Challenge: In-crop weed control Solution: DuPont™ Accent® DF herbicide

DuPont™ Accent® DF provides excellent control of grass weeds such as **wild oats, barnyard grass, fall panicum, green foxtail, old witchgrass and quackgrass.**

Application Timing: Apply Accent® DF on field corn from the 1- 8 leaf stage.

Rate: 10 acres/pouch

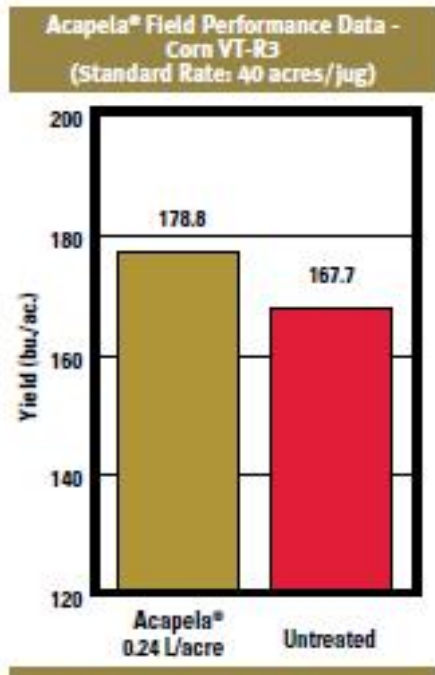
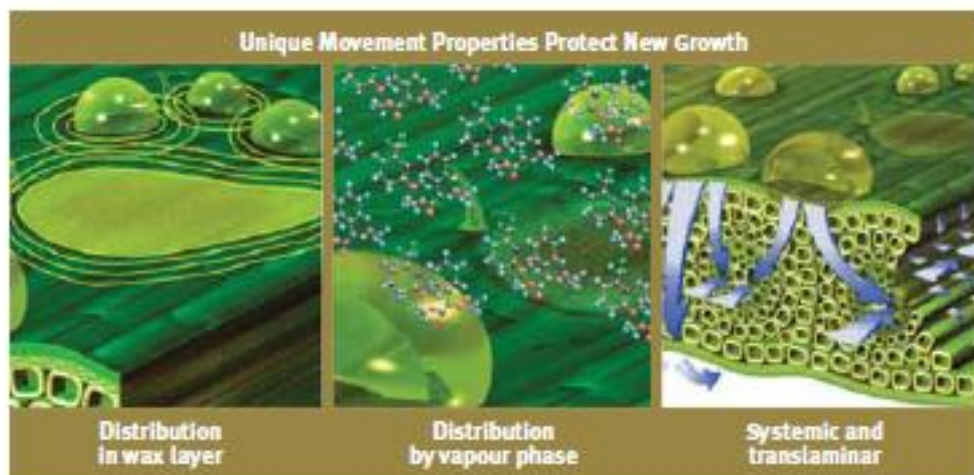
Challenge: Disease control Solution: DuPont™ Acapela® fungicide

DuPont™ Acapela® is a broad-spectrum fungicide designed to provide reliable protection against **Northern corn leaf blight** in corn. This product's advanced movement properties provide more complete coverage and superior performance. Acapela® is rapidly absorbed and moves quickly into and within each plant.

Application Timing: Begin applications prior to disease development and continue on a 7- to 14-day interval. Use higher rate and shorter interval when disease pressure is high.

For optimum disease control, apply at full tassel (VT) to milk stage (R3).

Rate: 30-45 acres/jug



Source: 2013 DuPont side-by-side trials (23 locations in ON and QC, (n=23))



Challenge: Insect control
Solution: DuPont™ Coragen® insecticide

Coragen® delivers reliable, consistent, long-lasting protection against key insects in corn. It can be applied in a wide range of temperatures (between 4°C and 40°C) and it has minimal impact on beneficial insects and pollinators when applied at label rates¹.

Coragen® provides control of multiple insects in corn.

Crop	Pest	Rate	PHI	Application Information
CORN	Black cutworm	101 mL/ac	1 day (sweet and seed corn)	Begin applications when treatment thresholds have been reached. Thorough coverage is important to obtain optimum control.
	Armyworm Fall armyworm Beet armyworm Variegated cutworm Corn earworm/ Tomato fruitworm European corn borer Western bean cutworm	101 mL/ac to 151 mL/ac		

Corn: we're doing more, so you can grow more

DuPont Crop Protection believes that corn has an exciting future in Western Canada. Beyond the products and strategies outlined here, we're working hard on new ideas and technologies that will allow you to take your crop from good to great.

For more information, contact your local DuPont representative, call the DuPont™ FarmCare® Support Centre at 1-800-667-3925 or visit cropprotection.dupont.ca

¹ In line with Integrated Pest Management and Good Agricultural Practices, insecticide applications should be made when pollinators are not foraging to avoid unnecessary exposure.

Refer to the Coragen® label for complete crop listing and use instructions.



TIPS FOR PRODUCING A SUCCESSFUL CORN CROP

Early maturity corn hybrids are now available for Western Canada, but this is one crop where attention to all the agronomic details count.

Target Seeding Rate

- Generally, desired seeding rates in corn range from 26,000 - 36,000* seeds / acre for grain, silage and/or grazing corn fields across Western Canada. Optimum population depends on the target area of growth (heat unit potential), the corn hybrid, date of planting, field preparation and management, along with economics.

Seed Placement

- Uniform seed depth and firm seed-soil contact are important.
- Optimum seeding depth is 1.5 inches or deeper to hit the moisture.
- Accurate seed depth and spacing is critical for even corn emergence.
- Uneven corn stands are highly detrimental to optimizing yield.

Field Preparation

- Ideal soil temperature at seeding = 10°C (Approximately May 10 – 18th). However, if your soil is fit for planting before these dates our recommendation is to start planting to take advantage of the warm soils.
- Tillage followed by harrowing is recommended for ideal plant establishment. This provides both a good seedbed and dramatically increases emergence with warmer soil temperature.
- Well drained Southern sloped fields are preferred.

Good Fertility is Important

- Target 1 lb. of Nitrogen (N) for 1 bushel of grain corn produced.
- 120 bu./ac. grain crop (or a 15 tonne silage crop) requires: 120 N - 55 Phosphorus (P) - 120 Potassium (K) - 22 Sulphur (S) lbs. of nutrients.

- Nutrients come from applied fertilizer, residual nutrients, and what the ground gives up during the growing season combined with manure in a corn on corn grazing rotation.
- A corn crop will remove the following nutrients per ton of wet (65%) silage: 8 lbs. N, 3.5 lbs. P, 8 lbs. K. Depending on a soil test sulphur at a rate of 20 lb./ac. may be needed.

Weed Control

Weed removal and control is extremely important in corn.

- Ensure weeds are controlled during the 3-8 leaf stage of the crop. This is the Critical Weed Free Period (CWFP). Use of residual herbicides in combination with glyphosate can help to ensure a clean crop during the CWFP. Weeds that emerge after the 8 leaf stage have minimal impact on final crop yield.
- Controlling volunteer glyphosate resistant canola is a key element of any corn weed management system. Ensure adding a second herbicide that will control volunteer canola escapes.
- Adding different herbicide groups to a Roundup Ready® corn system will help to manage against the spread of glyphosate resistant weeds. Adding an additional herbicide group in the tank with glyphosate can also provide additional benefits such as residual activity and control of volunteer canola.

*If yield expectations are lower, aim for the lower end of the seeding rate range.

**Refer to Provincial Crop Protection Guides in each respective province for specific glyphosate rates and formulations for applications on corn.

A portion of the Agronomic Best Practices is courtesy of DuPont Pioneer.

The above mentioned corn management recommendations are provided for informational use only.

Pioneer® brand seed product performance can be variable and subject to disease, weather, and pest pressure. Individual results may vary.

As with all crop protection products, read and follow label instructions carefully. All information effective May 2015.

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