

+++++ PRE-SEED ADD-IN HERBICIDES PROVIDE +++++

TRUE VALUE

FOR CANADIAN FARMERS

Early season weeds:
Compete with young seedlings for resources.



Moisture



Sunlight



Nutrients



Space to grow

Establish early and advance fast, becoming harder to control.



Reduce your crop's yield potential.



Pre-seed weed control has many benefits:



Reduces competition for a clean, efficient start.



Increases harvest efficiency.



Controls winter annual and perennial weeds.



Fewer weed seeds returned to the soil seed bank.



Significantly improves yield potential vs. untreated crops.



Leads to smaller, more evenly staged weeds at in-crop herbicide timing.



Offers herbicide resistance management when adding a pre-seed tank-mix partner.

Did you know?



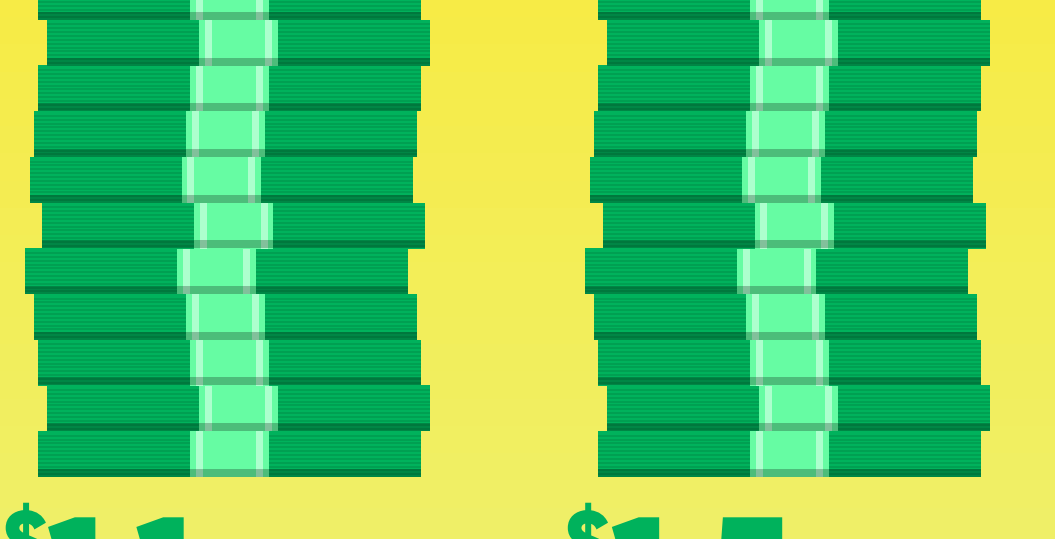
Early weed control during the critical weed free period has a more positive impact on crop yield vs. in-crop weed control.

Even if later applications control the weeds, the most significant yield loss is from early crop stage weed competition.



Why add a pre-seed herbicide from Corteva Agriscience™ to your tank-mix?

Pre-seed herbicides from Corteva are specifically designed to help manage **Group 9 weed resistance** and defend against **Group 2 resistant weeds.**



\$1.1 billion to \$1.5 billion

Annual cost of herbicide resistance to Canadian farmers due to increased herbicide use and decreased yield and quality.¹

Get your cereal crops off to a clean start.

Paradigm™ PRE

Arylex™ active

HERBICIDE

UP TO 21 DAYS

SoilActive™ technology controls weeds on the surface and weeds that have yet to emerge for up to 21 days following application.

Extended control of volunteer canola flushes.

Convenient GoDRI™ formulation means:

- More acres per case.
- Lighter & easier to transport.
- Faster mixing.
- Does not require heated storage.

Give your canola the best start possible.

Prospect™

Arylex™ active

HERBICIDE

3 effective modes of action when tank-mixed with glyphosate.

Compared to glyphosate alone, delivers more complete control of:

- Glyphosate tolerant, and all volunteer canola.
- Key broadleaf weeds.
- Winter annuals like Group 2 resistant cleaver biotypes.
- Group 9 resistant kochia.

Arylex™ active

And with 'Just GO' performance, you can:

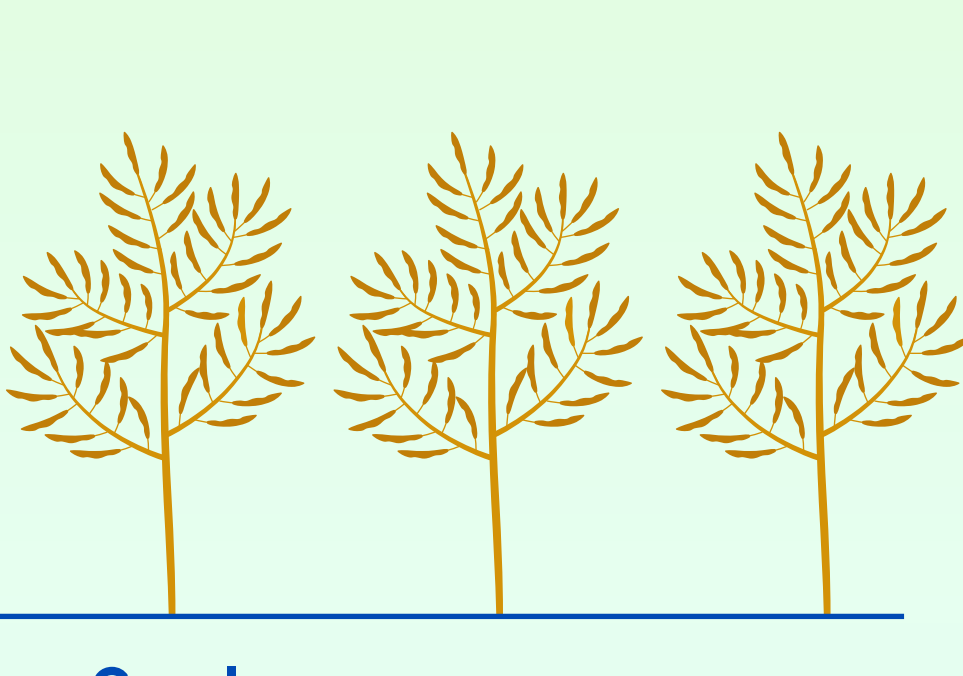
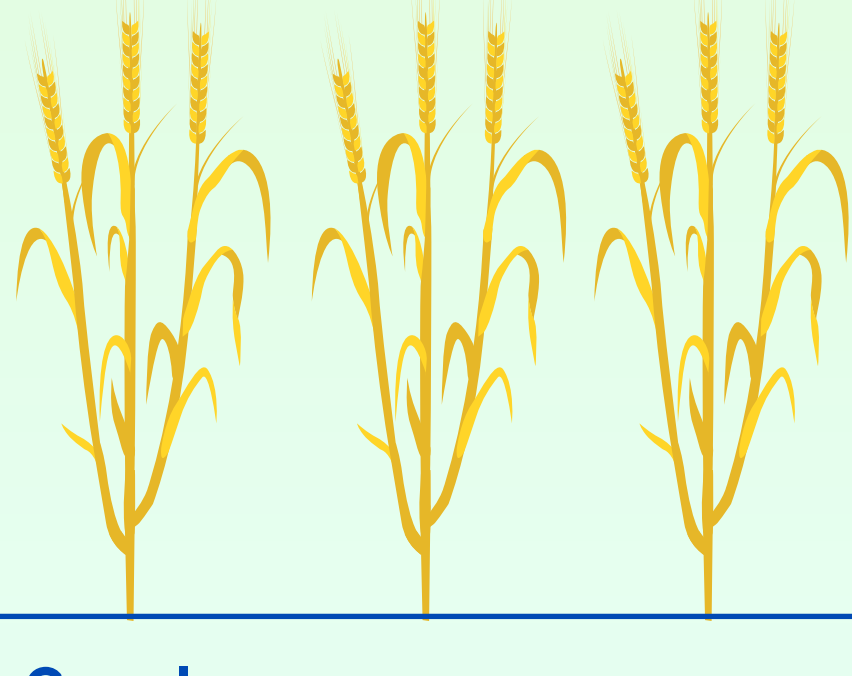


Spray when you want.



Control large weeds in cool and dry conditions.

Early weed control is paramount to producing high yielding cereal and canola crops.



Cereals

35.5 million acres seeded in Canada in 2021¹.

2.1 bushels/acre **yield advantage** when crop received an early spring pre-seed herbicide application vs. an application 3 weeks later*.

5X yield impact when broadleaf weeds like kochia emerge before crop*.

Canola

22.5 million acres seeded in Canada in 2021¹.

7 bushels/acre **yield advantage** when weeds were controlled at 1-2 leaf crop stage vs. controlled at the 6-7 leaf stage*.



What does this mean for farmers?

Cereals	Canola
\$27.12/bushel average price for wheat*	\$22/bushel average price for canola*
X 2.1 bushels/acre yield advantage	X 7 bushels/acre yield advantage
=	=
\$56.96 per acre	\$154.00 per acre

*Additional gross benefit of a pre-seed herbicide application.
*Excluding the cost of a pre-seed herbicide



1. State of weed resistance in Western Canada and future outlook. Hugh J. Beckie June 2018
2. Principal field crop areas. June 2021 (2022, January 29). Agriculture and Agri-Food Canada. <https://www150.statcan.gc.ca/n1/daily-quotidien/210629/dq210629b-eng.pdf>
3. Canada production statistics. 2022, January 8. The Canada Council on Canada. <https://www.counciloncanada.org/market-status/production/>
4. Sapsford, K.L., Hairy, F.A., Johnson, E.H., and Czornyj, G.S. (2007). Timing of Spring Application for Winter Annual Weed Control. University of Saskatchewan & Agriculture and Agri-Food Canada.
5. O'Donovan, J. & McClosky, A.S. (2002). Relationship between relative time of emergence of fatigose wheat (Fragopyrum tataricum) and yield loss of barley. Can. J. Plant Sci., 82(4), 861-863. doi:10.4141/P02-042
6. Harker, K., O'Donovan, J., Clayton, G., & Hoyle, J. (2008). Field-Scale Time of Weed Removal in Canada. Weed Technology, 22(4), 763-766. doi:10.1300/JWT-22-04-763
7. Current market prices as of January 28, 2022