

# VALUE OF HERBICIDE BASE LAYERING

## SOIL RESIDUAL HERBICIDES

Soil residual herbicides are a key component for managing herbicide-resistant weeds. And as an added bonus, they provide a pre-emergent yield advantage of up to **23%**.



Source: Gowan Canada Trial.

## DIVERSITY IN WILD OAT CONTROL

Proven methods to delay the development of herbicide resistance are to utilize multiple modes of action with different herbicide Groups, and to rotate between herbicide Groups.

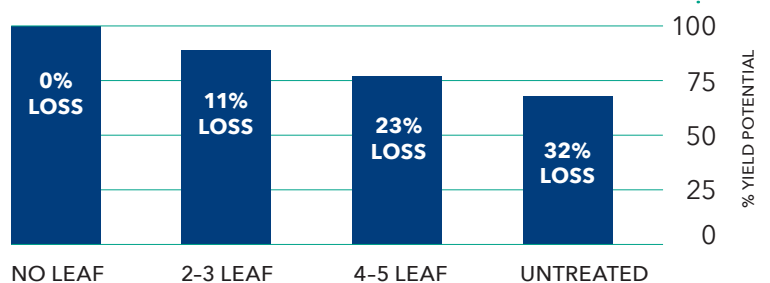
Herbicide layering or sequential applications with pre-emergent herbicides (Avadex®, Fortress®, Edge®, Treflan®), prior to in-crop herbicide applications, is a suggested method of using multiple modes of action. Herbicide layering is recommended by the Weed Science Society of America as an important resistance management strategy.

## THE PRE-EMERGENT YIELD ADVANTAGE

Any early-season competition from wild oats will reduce yields, even with as few as three plants per square metre (*Ag Canada, Lacombe*). The photo to the left shows how Avadex® allows your crop to grow with reduced competition, avoiding the 11% and 23% yield losses when wild oats are removed at the 2-3 or 4-5 leaf stage.

## CHOOSE THE RIGHT BASE LAYER PRODUCT

## TIMING OF WILD OAT REMOVAL



## DO YOU HAVE RESISTANT WEEDS?

YES		NO
<b>GROUP 1 OR 2 WILD OATS</b>	<b>BROADLEAF WEEDS</b>	<b>CEREALS</b>
<b>CEREALS + PULSES</b>	<b>CEREALS</b>	<ul style="list-style-type: none"> <li>AVADEX LIQUID EC</li> <li>AVADEX MICROACTIV</li> </ul>
<ul style="list-style-type: none"> <li>AVADEX LIQUID EC</li> <li>AVADEX MICROACTIV</li> </ul>	<ul style="list-style-type: none"> <li>FORTRESS MICROACTIV</li> </ul>	<b>OILSEEDS + PULSES</b>
<b>OILSEEDS</b>	<b>OILSEEDS + PULSES</b>	<ul style="list-style-type: none"> <li>EDGE GRANULAR</li> <li>FORTRESS MICROACTIV</li> <li>TREFLAN LIQUID EC</li> <li>TREFLAN MICROACTIV</li> </ul>
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## AVADEX® MICROACTIV™

Crop	Organic Matter			Seeding Depth
	2% or less	2-4%	Above 4%	
Spring or durum wheat, barley, canary seed	11 kg/ha* (10 lbs/ac)	14 kg/ha (12.5 lbs/ac)	17 kg/ha (15 lbs/ac)	Minimum 1.5" (place seed ½" below incorporation depth)
Canola, flax, mustard	14 kg/ha (12.5 lbs/ac)	17 kg/ha (15 lbs/ac)	22 kg/ha (20 lbs/ac)	As desired

\*Do not apply in fall on minimum tillage fields with less than 2% organic matter.

## EDGE® GRANULAR

% Organic Matter	Sandy, sandy loam		Loam, silt loam, silt, sandy clay loam, silty clay loam, clay loam, silty clay, clay	
	Spring	Fall	Spring	Fall
2-4% OM	17 kg/ha (15 lbs/ac)	22 kg/ha (20 lbs/ac)	17 kg/ha (15 lbs/ac)	22 kg/ha (20 lbs/ac)
4-6% OM	17 kg/ha (15 lbs/ac)	22 kg/ha (20 lbs/ac)	22 kg/ha (20 lbs/ac)	28 kg/ha (25 lbs/ac)
6-15% OM	22 kg/ha (20 lbs/ac)	28 kg/ha (25 lbs/ac)	22-28 kg/ha (20-25 lbs/ac)	28 kg/ha (25 lbs/ac)

## FORTRESS® MICROACTIV™

Crop	Organic Matter				Seeding Depth
	2% or less	2-4%	4-6%	Above 6%	
Spring or durum wheat	Do Not Use	11 kg/ha* (10 lbs/ac)	11-14 kg/ha** (10-12.5 lbs/ac)	14 kg/ha (12.5 lbs/ac)	Minimum 1.5" (place seed ½" below incorporation depth)
Barley	11 kg/ha* (10 lbs/ac)	11-14 kg/ha** (10-12.5 lbs/ac)	14 kg/ha (12.5 lbs/ac)	17 kg/ha (15 lbs/ac)	
Canola, flax, mustard	14 kg/ha (12.5 lbs/ac)	14 kg/ha (12.5 lbs/ac)	14 kg/ha (12.5 lbs/ac)	17 kg/ha (15 lbs/ac)	As desired

\*11 kg/ha for fall only. Do NOT USE in spring. \*\*14 kg/ha for fall only.

## TREFLAN® MICROACTIV™

% Organic Matter	Sandy, sandy loam	Loam, silty clay loam, silt loam, clay loam, silt, silty clay, sandy clay loam, clay
2-6% OM	11 kg/ha (10 lbs/ac)	14 kg/ha (12.5 lbs/ac)
6-15% OM	14 kg/ha (12.5 lbs/ac)	14-17* kg/ha (12.5-15 lbs/ac)

\*Higher rate for heavier wild oat infestations

## AVADEX® LIQUID EC

Crop	Organic Matter		Seeding Depth
	4% or less	Above 4%	
Spring or durum wheat	2.5 L/ha (1.0 L/ac)	2.9 L/ha (1.2 L/ac)	Minimum 1.5" (place seed ½" below incorporation depth)
Barley	2.9 L/ha (1.2 L/ac)	3.5 L/ha (1.4 L/ac)	
Canola, flax, mustard	3.5 L/ha (1.4 L/ac)	4.6 L/ha (1.9 L/ac)	As desired
Field peas	3.5 L/ha (1.4 L/ac)	3.5 L/ha (1.4 L/ac)	

## TREFLAN® LIQUID EC

% Organic Matter	Sandy, sandy loam		Loam, silty clay loam, silt loam, clay loam, silt, silty clay, sandy clay loam, clay	
	Spring	Fall	Spring	Fall
2-6% OM	1.7 L/ha (0.7 L/ac)	2.3 L/ha (0.9 L/ac)	2.3 L/ha (0.9 L/ac)	3.0 L/ha (1.2 L/ac)
6-15% OM	2.3 kg/ha (0.9 L/ac)	3.0 L/ha (1.2 L/ac)	2.3-3.0 L/ha (0.9-1.2 L/ac)*	3.0-3.4 L/ha (1.2-1.4 L/ac)*

\*Higher rate for heavier wild oat infestations

For more information call 1-800-960-4318, email [info@gowanco.com](mailto:info@gowanco.com) or visit [gowanCanada.com](http://gowanCanada.com).

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CANADA