Unique Mode of Action

Brake® On! Herbicide

Product Use Guide

SePRO Ag

Upgrade Your Crop™

Brake® On! Herbicide

New Herbicide for Citrus Fruit, Pome Fruit, Stone Fruit, Grape, Berry and Small Fruit (except strawberries), Tree nuts, Tropical and Subtropical Fruit, Edible Peel (Crop Subgroup 23A), Tropical and Subtropical fruit, Inedible Peel (Crop Subgroup 24B), and Hops with a New Mode of Action

Although new to most permanent crop growers, the active ingredient in Brake On! herbicide has been used successfully in cotton for over 10 years. Research in permanent crops began shortly thereafter with the goal of understanding the spectrum of weeds controlled and generating crop selectivity data for these markets.

Unique Mode of Action

Brake On! has a unique mode of action relative to all other residual herbicides used in permanent crops. Categorized as a HRAC Group 12, it inhibits phytoene desaturase (PDS), an enzyme necessary for carotenoid biosynthesis. Lack of carotenoids causes bleaching in susceptible plant species. Brake On! is taken up by the roots and readily translocated in susceptible weeds making it ideally suited for preemergence use. It controls a broad-spectrum of annual grass and broadleaf weeds, including weeds that have developed resistance to other herbicides.

This unique mode of action makes Brake On! a perfect tank-mix partner for other residual herbicides, and a rotational option in many IPM programs. Including Brake On! in your program helps protect against the development of resistance and broadens the spectrum of weeds controlled, making your program more effective and sustainable.

Broad-spectrum Weed Control

Broadleaf Weeds Controlled		Grasses Controlled
Annual sowthistle	Pigweeds (including Palmer amaranth)	Annual bluegrass
Blessed milkthistle	Prickly lettuce	Barnyardgrass
Carpetweed	Prickly sida (teaweed)	Crabgrass
Florida pusley	Prostrate knotweed	Goosegrass
Ground cherries	Puncturevine	Hare barley
Horseweed (marestail)	Purple deadnettle	Italian ryegrass
Hairy fleabane	Purslane	Johnsongrass (seedling)
Hairy willowherb	Ragweeds	Junglerice
Henbit	Shepherd's purse	Orcutt lovegrass
Lambsquarters	Spurges	Fall panicum
London rocket	Redstem filaree	Red spangletop
Mallow	Russian thistle	
Nightshades	Waterhemp	
Palmer amaranth	Whitestern filaree	
Panicle willowweed		

Extended Performance Under Irrigated/Wet Conditions

Research has shown irrigation or wet soil conditions lengthen weed control provided by Brake On! herbicide.

Foundational Weed Control without Crop Safety Concerns

Brake On! herbicide delivers all this performance, without exerting undue stress on your crop. Numerous trials over the past several seasons demonstrates lack of phytotoxicity across a broad-spectrum of crops at various rate ranges. SePRO Ag encourages growers to test Brake On! on a portion of their acres prior to complete adoption. The table below summarizes selectivity trials on various crops, across numerous growth stages and across different climatic conditions.

Crop Group	Crop	Year	Result	Cooperator
Berry & Small Fruit	Blueberry (Newly transplanted)	2022	No injury at 2X max label rate	Dr. Marcelo Moretti - Oregon State
	Blueberry	2022	No injury at max label rate	Dr. Tim Grey - University of Georgia
	Blueberry (Newly transplanted)	2022	No injury at 4X max label rate	Dr. Bruce Kirksey - Agri-Center International
	Grape (2 locations)	2019	No injury at 2X max label rate	Dr. Mick Canevari - UCCE Emeritus
	Grape	2020	No injury at 2X max label rate	Dr. Mick Canevari - UCCE Emeritus
	Grape	2022	No injury at 2X max label rate	Dr. Marcelo Moretti - Oregon State
Citrus Fruit	Lemon	2018	No injury at 2X max label rate	Steve Deitz - Sawtooth Ag Research
	Lemon	2019	No injury at 2X max label rate	Steve Deitz - Sawtooth Ag Research
	Orange	2015	No injury at 2X max label rate	Dr. Brent Sellers - Univeristy of Florida
	Tangerine	2014	No injury at 2X max label rate	Steve Deitz - Sawtooth Ag Research
	Tangerine	2018	No injury at 2X max label rate	Steve Deitz - Sawtooth Ag Research
Pome Fruit	Apple	2020	No injury at 2X max label rate	Megan Townsend - Crop Matters, LLC
	Apple	2020	No injury at 2X max label rate	Collins Agricultural Consultants
	Apple	2020	No injury at 2X max label rate	Dr. Marcelo Moretti - Oregon State
	Apple	2021	No injury at 2X max label rate	Wayne Mitchem - NC State
	Apple (Newly transplanted)	2022	No injury at 2X max label rate	Dr. Marcelo Moretti - Oregon State
	Pear	2020	No injury at 2X max label rate	Dr. Marcelo Moretti - Oregon State
	Pear (2nd leaf)	2021	No injury at 2X max label rate	Columbia Ag Research, Inc.
	Pear (Newly transplanted)	2022	No injury at 2X max label rate	Dr. Marcelo Moretti - Oregon State
Stone Fruit	Peach	2015	No injury at 2X max label rate	Dr. Brad Hanson - UC Davis
	Peach	2016	No injury at 2X max label rate	Dr. Brad Hanson - UC Davis
	Peach	2016	No injury at 2X max label rate	Dr. Mick Canevari - UCCE Emeritus
	Peach	2021	No injury at 2X max label rate	Wayne Mitchem - NC State
	Prune	2017	No injury at max label rate	Dr. Brad Hanson - UC Davis
	Prune	2018	No injury at 2X max label rate	Dr. Brad Hanson - UC Davis
	Prune (year 2 sequential treatment)	2019	No injury after 2 consecutive years at 2X label rate	Dr. Brad Hanson - UC Davis
	Sweet Cherry	2017	No injury at max label rate	Dr. Brad Hanson - UC Davis
	Sweet Cherry	2017	No injury at max label rate	Dr. Mick Canevari - UCCE Emeritus
	Sweet Cherry	2018	No injury at 2X max label rate	Dr. Mick Canevari - UCCE Emeritus
	Sweet Cherry	2020	No injury at 2X max label rate	Megan Townsend - Crop Matters, LLC
	Sweet Cherry	2020	No injury at 2X max label rate	Collins Agricultural Consultants
	Sweet Cherry	2020	No injury at 2X max label rate	Collins Agricultural Consultants
	Sweet Cherry	2020	No injury at 2X max label rate	Dr. Marcelo Moretti - Oregon State
	Sweet Cherry	2021	No injury at 2X max label rate	Dr. Marcelo Moretti - Oregon State
	Sweet Cherry (1st leaf)	2021	No injury at 6X max label rate	Columbia Ag Research, Inc.
Tree Nut	Almond	2015	No injury at 2X max label rate	Dr. Brad Hanson - UC Davis
	Almond (45 days after transplant)	2018	No injury at 2X max label rate	Dr. Brad Hanson - UC Davis
	Almond (2 leaf)	2019	No injury at 6X max label rate	Dr. Brad Hanson - UC Davis
	Almond (3 leaf, year 2 sequential treatment)	2020	No injury after 2 consecutive years at 6X max label rate	Dr. Brad Hanson - UC Davis
	Hazelnut (Newly transplanted)	2022	No injury at 2X max label rate	Dr. Marcelo Moretti - Oregon State
	Pecan (2 leaf)	2022	No injury at 2X max label rate	Dr. Tim Grey - University of Georgia
	Pistachio	2016	No injury at 1.5X max label rate	Steve Deitz - Sawtooth Ag Research
	Pistachio	2017	No injury at 1.5X max label rate	Steve Deitz - Sawtooth Ag Research
	Pistachio	2018	No injury at 2X max label rate	Steve Deitz - Sawtooth Ag Research
	Walnut	2015	No injury at 2X max label rate	Dr. Mick Canevari - UCCE Emeritus
	Walnut	2016	No injury at 2X max label rate	Dr. Mick Canevari - UCCE Emeritus
T&ST, Edible Peel	Olive	2018	No injury at max label rate	Dr. Mick Canevari - UCCE Emeritus
	Olive	2018	No injury at 2X max label rate	Dr. Mariano Galla - UC Davis
T&ST, Inedible Peel	Pomegranate	2017	No injury at 2X max label rate	Dr. Brad Hanson - UC Davis

The Bottom line

Brake On! herbicide benefits your residual weed control program in several ways:

- Unique mode of action to manage weed resistance, ensuring a sustainable program over time
- Broad-spectrum, season long control frees you up to manage other aspects of your operation
- Performs well in irrigated or wet conditions when other herbicides may fade
- Outstanding crop safety ensures your rows stay clean, and your crop stays green

Registration Status

Currently registered in the following states:

AL, AZ, AR, CO, FL, GA, ID, LA, MI, MN, MS, MO, MT, NJ, NM, NC, OH, OK, OR, PA, SC, TN, TX, UT, VA, WA, and WI

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