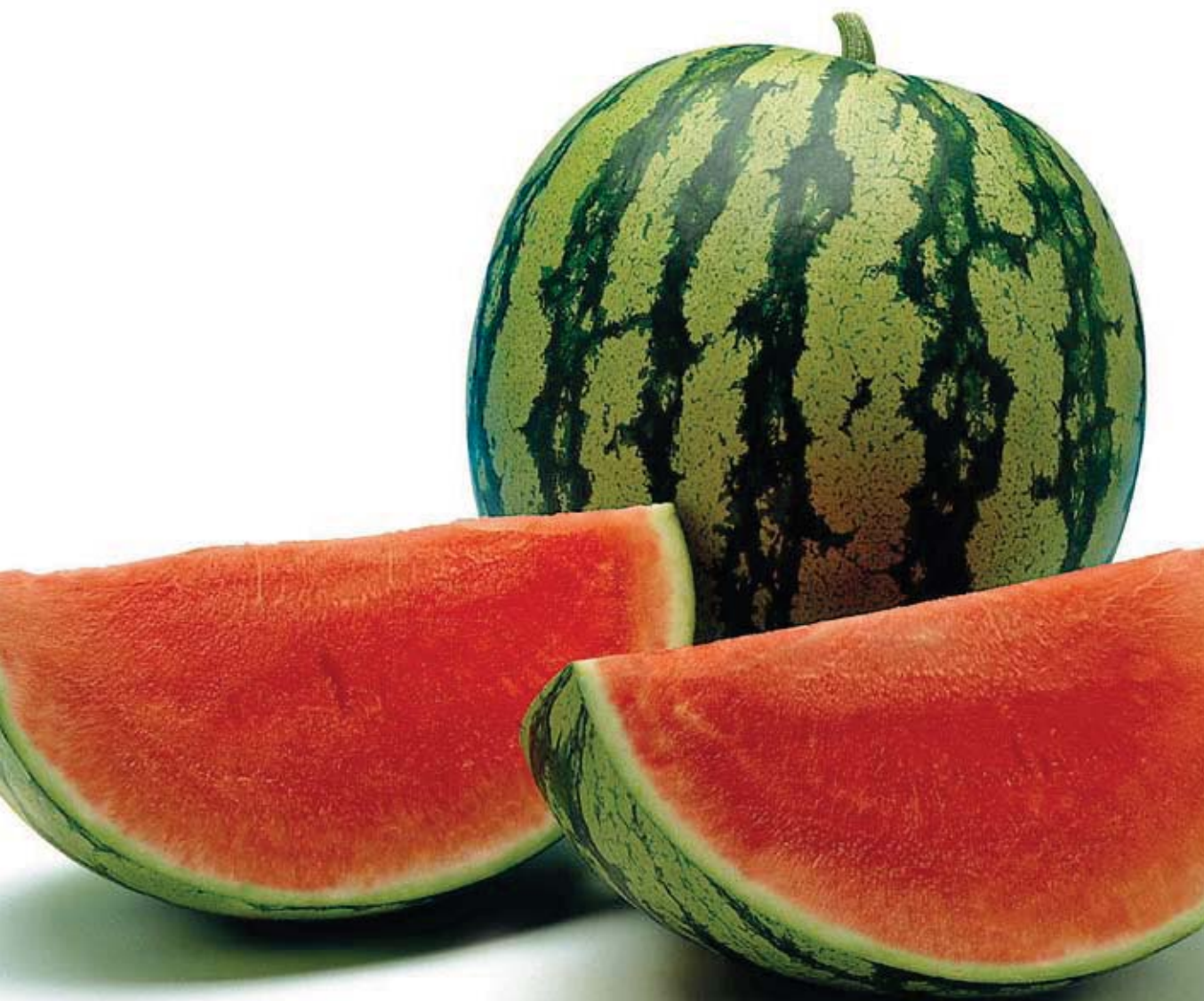




syngenta

# Cucurbit Vegetable

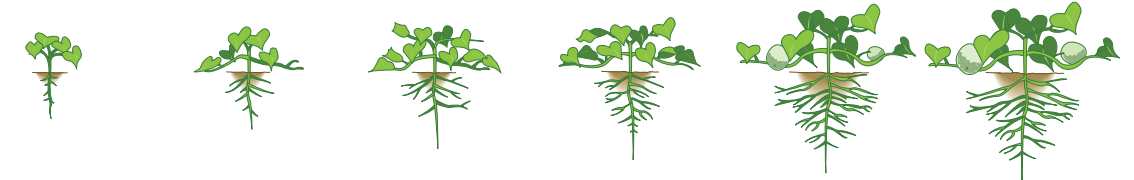
## Insect Control





## Suggested Cucurbit Vegetable Programs For Insect Control

### Florida Insect Control for Cucurbits



## WHAT IS DURIVO?

### Insect Protection With Durivo

Durivo® insecticide is a broad-spectrum, systemic insecticide controlling key lepidopteran, sucking and chewing insect pests in vegetables. When Durivo is applied to the soil, it is readily taken up by the roots of germinating seedlings or transplants and is rapidly translocated throughout the plant. Because of its systemic activity, Durivo provides excellent residual control of key insect pests in cucurbit vegetables.

### Durivo Spectrum Of Activity

SUCKING AND CHEWING INSECTS	LEPIDOPTERANS
Aphids Cucumber Beetles* Flea Beetles Leafhoppers Leafminers* Thrips Whiteflies	Melonworm Pickleworm

\*Suppression

Timing of key pests	Flea Beetle	Thrips			
	Leafminers				
	Whiteflies				
	Aphids		Leafhoppers		
	Cucumber Beetles				
	Lepidopteran Complex: Cutworms, Loopers, Melonworm, Pickleworm				
			Mites		
Option 1: Durivo at transplanting or through drip chemigation	Durivo at transplanting or through drip chemigation				
		Agri-Mek			
			Voliam Xpress	Warrior II with Zeon Technology	
			Fulfill		
Option 2: Foliar program	Actara				
		Voliam Flexi	Voliam Xpress	Warrior II with Zeon Technology	
		Agri-Mek	Trigard		
				Fulfill	

#### Option One:

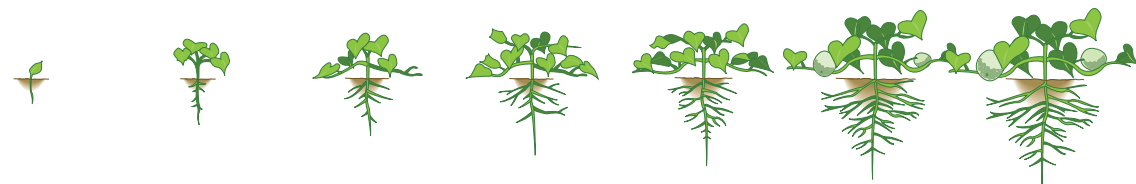
- 1) Durivo applied at transplanting will provide up to five weeks of broad spectrum control of both sucking and chewing insects. Alternatively, Durivo can be applied through drip chemigation after transplanting.
- 2) Apply Agri-Mek® insecticide when mite populations appear.
- 3) Voliam Xpress® and Warrior II with Zeon Technology® insecticides applied later in the season will provide additional control of lepidoptera as well as control of other insects like cucumber beetles, stink bugs, plant bugs and leafhoppers.
- 4) Use Fulfill® insecticide later in the season to control aphids and whiteflies.

#### Option Two:

- 1) Actara® insecticide used any time during the season will control flea beetles and sucking pests such as whiteflies, aphids, leafhoppers and thrips.
- 2) Voliam Xpress will provide control of a number of pests, including lepidopteran pests, beetles, leafminers, leafhoppers and plant bugs. Voliam Flexi™ insecticide will control lepidopteran pests and sucking pests.
- 3) Apply Agri-Mek when mite or leafminer populations occur. Rotate with Trigard® insecticide for resistance management of leafminer populations.
- 4) Use Warrior II with Zeon Technology late in the season for cleanup of stink bugs and leafhoppers.
- 5) Use Fulfill for late season control of aphids and whiteflies.



## Arizona and California Insect Control for Fall Melons



Timing of key pests		Flea Beetle					
		Leafminers					
		Whiteflies					
		Cucumber Beetles					
		Aphids, Leafhoppers					
		Lepidopteran Complex: Armyworms, Cabbage Looper, Cutworms					
			Mites				
Option 1: At-planting seed treatment application followed by foliar program		FarMore DI 400 applied as seed treatment					
			Voliam Xpress	Warrior II with Zeon Technology	Fulfill		
Option 2: At-planting or post-planting application followed by foliar program		Durivo at planting/post-planting application					
			Agri-Mek	Trigard			
				Voliam Xpress	Fulfill		
Option 3: At-planting application followed by foliar program		Platinum 75SG applied at planting					
			Voliam Xpress	Warrior II with Zeon Technology	Fulfill		
Option 4: Foliar program			Actara	Fulfill	Actara		
			Agri-Mek	Trigard			
			Warrior II with Zeon Technology	Voliam Xpress	Voliam Flexi		

### Option One:

- 1) FarMore® DI 400 seed treatment technology (a proprietary combination of separately registered products containing Cruiser® insecticide, Apron XL®, Dynasty® and Maxim® fungicides) will provide early season control of flea beetles, whiteflies, aphids, leafminers and leafhoppers.
- 2) The use of Voliam Xpress and Warrior II with Zeon Technology in rotation throughout the season provides excellent lepidopteran control while utilizing multiple modes of action for resistance management. Warrior II with Zeon Technology or Voliam Xpress will also control stink bug populations and other secondary pests.
- 3) Fulfill applied later in the season will control aphids utilizing a different mode of action than neonicotinoids.
- 4) Apply Agri-Mek when mite populations appear. Agri-Mek in rotation with Trigard will also provide excellent leafminer control.

### Option Two:

- 1) Durivo applied at-planting or post-planting (shanked, drip chemigation) will provide significant residual control of both sucking and chewing insects.
- 2) Apply Agri-Mek when mite populations appear. Agri-Mek in rotation with Trigard will also provide excellent leafminer control.
- 3) Voliam Xpress applied later in the season will provide additional lepidopteran control as well as control of other insects like stink bugs and leafhoppers.
- 4) Fulfill applied later in the season will control aphids utilizing a different mode of action than neonicotinoids.

### Option Three:

- 1) Platinum 75SG applied at planting will provide long residual control of sucking insect pests like flea beetles, whiteflies, aphids, leafminers and leafhoppers.
- 2) The use of Voliam Xpress and Warrior II with Zeon Technology in rotation throughout the season provides excellent lepidopteran control while utilizing multiple modes of action for resistance management. Warrior II with Zeon Technology or Voliam Xpress will also control stink bug populations.
- 3) Fulfill applied later in the season will control aphids utilizing a different mode of action than neonicotinoids.
- 4) Apply Agri-Mek when mite populations appear.

### Option Four:

- 1) Actara provides control of sucking pests like aphids and whiteflies. Fulfill provides an alternative mode of action for control of aphids and suppression of whiteflies.
- 2) Apply Agri-Mek when mite populations appear. Agri-Mek in rotation with Trigard will also provide excellent leafminer control.
- 3) Warrior II with Zeon Technology applied earlier in the season will control a number of different key pests in melons.
- 4) Voliam Xpress will control a number of pests, including lepidopteran pests, beetles, leafminers and leafhoppers.
- 5) When sucking and chewing pests overlap or occur at the same time, Voliam Flexi is an excellent choice.

## TECHNICAL OVERVIEW

### Technical Features

- » Broad-spectrum, systemic insecticide that controls key lepidopteran, sucking and chewing insect pests
- » Combination of chlorantraniliprole (CTPR) and thiamethoxam (TMX)
- » Readily taken up by the roots of germinating seeds or transplants and rapidly transported throughout the plant
- » Low use rates
- » Provides excellent residual control of key insect pests in vegetables
- » Compatible with Integrated Pest Management (IPM) programs—minimal impact on beneficial arthropods
- » Wide margin of plant safety when used in accordance with the label



## Technical Profile

### Durivo

<b>Chemistry</b>	Chlorantraniliprole: diamide, Insecticide Resistance Action Committee (IRAC) Group 28; Thiamethoxam: neonicotinoid, IRAC Group 4A
<b>Formulation</b>	Soluble concentrate containing 2.5 lb a.i./gal
<b>Precautions/Safety</b>	Caution, Standard Personal Protective Equipment (PPE), 12-hour Restricted-entry Interval (REI)
<b>Tank Mix Guidelines</b>	Durivo is compatible with most commonly used tank mix partners; however, always consult the product label for complete use directions and precautions.

## Durivo Label At A Glance\*

### Cucurbit Vegetables

<b>Rate</b>	10 – 13 fl oz/A
<b>Maximum Amount per Growing Season</b>	13 fl oz/A
<b>Preharvest Interval (PHI)</b>	30 days
<b>REI</b>	12 hours
<b>Use Restrictions</b>	Do not use Durivo in nurseries, plant propagation houses, greenhouses or any plants grown for use as transplants.

\*Always consult the product label for a complete list of registered crops, use directions and application information.



## DIRECTIONS FOR USE

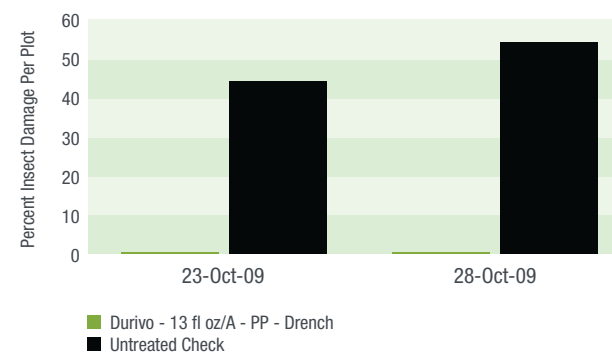
### Best Use Guidelines\*

- » Durivo should be applied during planting or transplanting as an in-furrow spray, transplant hole drench or narrow surface band above the seedline; after planting as a post-seeding, post-transplanting or hill drench; drip chemigation; or root zone and shank application, which allow the insecticide to be absorbed by plant roots. Although Durivo is quickly taken up by plant roots and rapidly moves throughout the plant, the use of sufficient water volume will ensure the product contacts the roots, resulting in optimal uptake and performance.
- » Some insect pests are known to develop resistance to products after repeated use. Because resistance development cannot be predicted, the use of Durivo should conform to sound resistance management practices established for the crop and use area.

\*Always read and follow label instructions before buying or using this product.

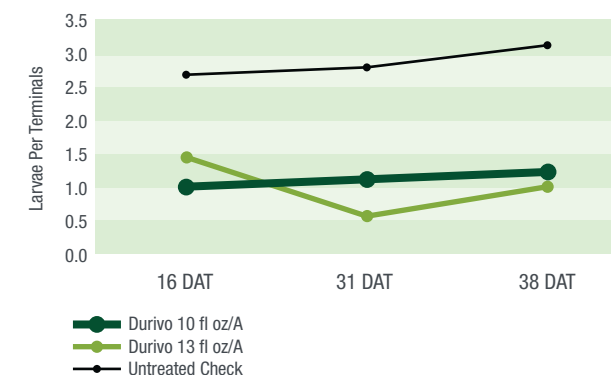
## PERFORMANCE RESULTS

### CUCUMBERS: Melonworm (*Diaphania hyalinata*) Control



Notes: Plant – 9 September 2009, PP = Post Plant – 1 October 2009  
Source: USVH010212009 – Syngenta VBRC; Vero Beach, Florida, 2009

### CUCUMBERS: Pickleworm (*Diaphania nitidalis*) Control



Notes: Post Plant – 21 March 2007. DAT = Days After Treatment.  
Source: USV0010072007 – Syngenta VBRC; Vero Beach, Florida, 2007

For more information, visit [www.syngentacropprotection.com](http://www.syngentacropprotection.com), [www.durivo-insecticide.com](http://www.durivo-insecticide.com) or call the Syngenta Customer Center at 1-866-SYNGENT(A) (796-4368).

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**Important: Always read and follow label instructions before buying or using Syngenta products. The instructions contain important conditions of sale, including limitations of warranty and remedy.**

**Agri-Mek, Voliam Xpress and Warrior II with Zeon Technology are Restricted Use Pesticides.**

**Actara, Durivo, Platinum 75SG, Voliam Flexi, and Voliam Xpress are not currently registered for use or sale in all states. Please check with your state or local extension service before buying or using these products.**

Actara, Durivo, Platinum 75SG, Voliam Flexi, Voliam Xpress and Warrior II with Zeon Technology are highly toxic to bees exposed to direct treatment on blooming crops and weeds. Do not apply these products or allow them to drift onto blooming plants while bees are foraging in the treatment area.

FarMore Technology is a seed company- or seed technology provider-applied promotional combination of separately registered seed protection products and proprietary application technologies.

Actara®, Agri-Mek®, Apron XL®, Cruiser®, Durivo®, Dynasty®, FarMore® DI 400, Fulfill®, Maxim®, Platinum®, Trigard®, Voliam Flexi™, Voliam Xpress®, Warrior II with Zeon Technology® and the Syngenta logo are trademarks of a Syngenta Group Company.