

Exirel[®] Insect Control

powered by Cyazypyr[®] active



Help your vegetables realize their ultimate potential.

Exirel[®] insect control powered by Cyazypyr[®] active is a groundbreaking product that provides protection from insect pests for a stronger crop in the field to maximize the opportunity for better results at harvest.

Exirel insect control is powered by Cyazypyr[®] active, the second active ingredient in the anthranilic diamide class, but the first to control a cross spectrum of chewing and sucking pests.

Key benefits of Exirel insect control

- Unique cross spectrum activity.
- Rapid feeding cessation resulting in crop protection from feeding damage and reduced transmission of plant diseases.
- Translaminar activity and local translocation.
- Impact on multiple pests' life stages, including pest reproduction.
- Low impact on predators and parasitoids.
- Effective control of susceptible species and pests resistant to other chemistries.



Designed for foliar applications

Exirel insect control is formulated to optimize leaf penetration and local systemic movement, which improves coverage and protection from a cross spectrum of pests. When used early in the crop cycle, Exirel insect control improves the opportunity for better yields and quality at harvest. Exirel insect control is not labeled for use as a soil treatment. For soil applications of Cyazypyr active, see the Exirel insect control label.

Exirel insect control

Active ingredient name: Chlorantraniliprole

Chemical class: IRAC Group 28, anthranilic diamide

Formulation: 10 SE

Registered by the EPA under its Reduced Risk Pesticide Program for most of the labeled crops*

PHI in cucurbit vegetables: One day

Short REI: 12 hours

Exirel® insect control powered by Cyazypyr® active use rates — cucurbit vegetables (EPA Group 9)

Rate range (fluid ounces product per acre)	Pest spectrum	PHI (preharvest interval) (days)	REI (re-entry interval) (hours)
7.0–13.5	Beet armyworm, melonworm, pickleworm, Western yellowstriped armyworm	1	12
10.0–17.0	Cabbage looper		
13.5–20.5	Cotton/melon aphid ¹ , flea beetle ² , green peach aphid ¹ , leafminer (<i>Liriomyza</i> spp.) ¹ , thrips (foliage feeding only) ² , whitefly ¹		

¹ For best performance, use with an effective adjuvant. See “Use of Adjuvants” section in label.

² Suppression only. See label for additional information.

Applied early in the pest infestation, Exirel insect control helps maintain whitefly populations below damaging levels

Exirel insect control affects insects’ muscles, resulting in rapid feeding cessation and disruption of reproduction. Field evaluations show that intoxicated pests display the following symptoms:

- Following exposure to Exirel insect control, adult and nymph-stage whiteflies stop feeding. When applications are made within the first 30 days of a crop’s life cycle, reduced feeding results in lower plant stress as well as a reduction in transmission of plant diseases such as cucurbit yellow stunting disorder virus (CYSDV), resulting in visibly more vigorous plants.
- Intoxicated whitefly adults are less mobile, and their ability to mate and lay eggs is impaired. The result is reduced reproduction (see figures 1 and 2). The reduced mobility also helps limit the spread of CYSDV. When disturbed, intoxicated adult whiteflies stay in place, thereby helping reduce the spread of CYSDV. Exirel insect control also

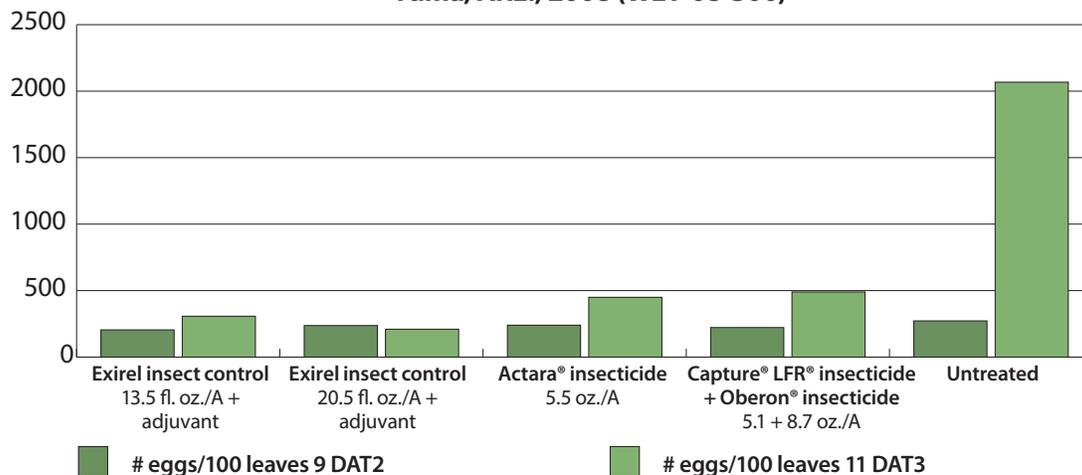


Silverleaf whitefly (*Bemisia tabaci*)

significantly affects whitefly egg lay and, in turn, whitefly nymph production.

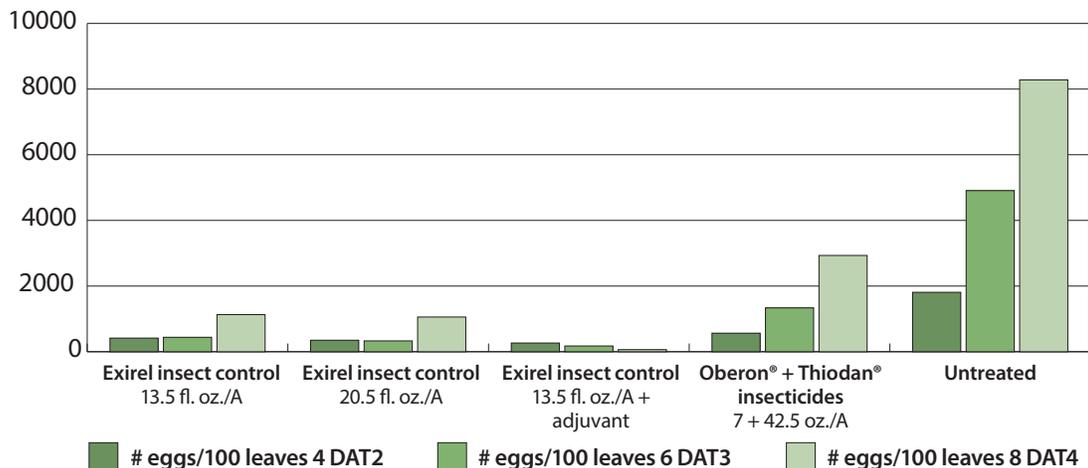
- On melons treated with Exirel insect control, the number of whitefly eggs that appear on newly expanding foliage is significantly reduced compared with grower standard treatments.
- Direct mortality of an adult whitefly occurs up to three days post application of Exirel insect control.

Figure 1. Impact of Exirel insect control on whitefly eggs in cantaloupes Yuma, Ariz., 2008 (WET-08-300)



Impact of Exirel® insect control powered by Cyazypyr® active on whitefly eggs in cantaloupes Yuma, Ariz., 2009 (WET-09-106)

Figure 2.



Spray preparation

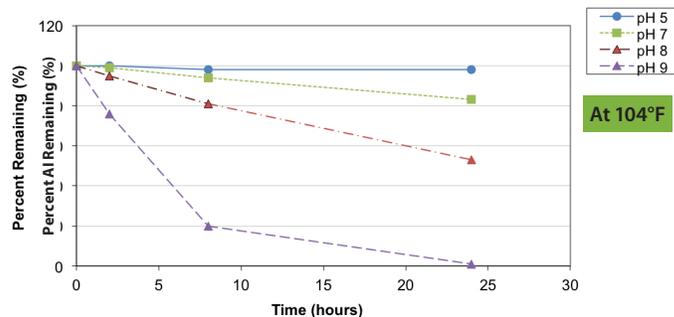
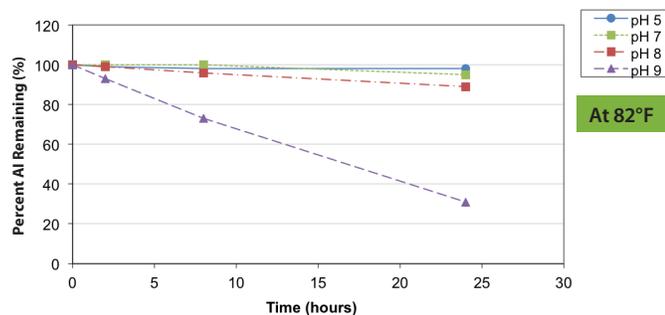
Acidification of spray tank: If the pH of the spray tank after all products have been added and mixed is above pH 8, adjust to pH 8 or less using a registered acidifying agent. Spray tanks of pH 8 or less can be held for up to eight hours before spraying. Do not store the spray mixture overnight in the spray tank.

Compatibility: Since formulations may be changed and new ones introduced, premix a small quantity of a desired tank mix and observe for physical incompatibility e.g., settling out, flocculation etc. Avoid mixtures of several materials and very concentrated spray mixtures.

Exirel insect control can be mixed with pesticide products labeled for use on crops on this label in accordance with the most restrictive of label limitations and precautions. Do not exceed labeled dosage rates. This product cannot be mixed with any product containing a label prohibition against such mixing.

Exirel insect control: Handling characteristics

Chemical stability of Exirel insect control in the tank water is pH and T° dependent. **Refer to label for use directions.**



For optimum performance, the pH of the tank solution should be maintained at or below pH 8. Use of an acid buffer or prompt application after mixing is recommended in situations where this condition is not met.

Source: DuPont Stine-Haskell Research Center, Delaware, USA (2010-11)

General guidance on impact of tank-mixed adjuvants when used with Exirel® insect control¹ powered by Cyazypyr® active

¹ Data on multiple laboratory, greenhouse and field studies from different countries

Adjuvant class and mode of action	Overall rating	Efficacy on sucking insects	Efficacy on chewing insects	Rainfastness/residual control — all pests
Methylated seed oils (MSO) Provides good spreading and wetting, reduces evaporation, solubilizes active ingredient, increases leaf cuticle penetration	Best	Good	Moderate	Good
Blends (methylated seed oil + nonionic + organosilicone) Same as MSO, but better spreading	Best	Good	Moderate	Good
Vegetable oils Variable spreading and wetting properties, depending on quality and amount of surfactants added; low solubilization/penetration to cuticle	Good-moderate	Good	Moderate	Good
Petroleum oils Same as MSO, but not good solubilizers	Good	Good	Moderate	Good
Light paraffinic petroleum/mineral oils Good wetting and spreading, some solubilization; generally most appropriate for tree fruits because of crop safety; typically need higher rates than other oils (0.5% for MSO vs. 1–5% for light oils)	Good-moderate	Good	Moderate	Good
Nonionic Good spreading and wetting, but not good solubilization; limited help with leaf penetration, primarily via stomates	Moderate	Good	Moderate	Good
Organosilicones Best spreading, good wetting, not good solubilization; limited help with leaf penetration primarily via stomates; can have negative effects on rainfastness and excessive runoff can occur if wrong rate is used	Moderate	Good	Moderate	Poor

■ = Best ■ = Good ■ = Moderate ■ = Poor

Maximum Residue Levels (MRLs)

Exirel insect control is registered with the EPA and has received registrations in most states. For updates to MRL status, please refer to the Global Database (globalmrl.com). For any specific MRL-related questions on Exirel insect control to support your crop export management decisions, please contact your local representative.

Best Management Practices

Because Exirel insect control is highly toxic to bees, it is important to follow best management practices when treating blooming crops or weeds where bees may be present.

- Semi-field and field tests indicate no biologically relevant impact on honeybee colonies (adults and brood) if sprays are made after daily bee flight.
- Make applications to the target site after sunset or at night.
- Risk assessments indicate no risk to bees resulting from oral exposure to residues of cyantraniliprole in pollen or nectar.
- No effects have been observed on honeybees after three hours of aging of spray deposits at maximum label rate of 20.5 oz./A (0.134 lb. ai/A).

For more information, contact your local FMC retailer or representative about Exirel insect control from FMC and visit us at FMCCrop.com.

Capture® LFR® insecticide is a Restricted Use Pesticide. Always read and follow label directions and precautions for use. Some products may not be registered for sale or use in all states. As of November 1, 2017, the USEPA registration for DuPont™ Exirel® insect control with Cyazypyr® active was sold by E.I. du Pont de Nemours and Company to FMC Corporation. FMC, Capture, LFR, Exirel and Cyazypyr are trademarks of FMC Corporation or an affiliate. Actara is a trademark of Syngenta Group Company. Oberon and Thiodan are trademarks of Bayer CropScience. ©2018 FMC Corporation. All rights reserved. 17-FMC-0975 05/18

