



Help your vegetables realize their ultimate potential.

**DuPont™
Exirel®**
insect control
powered by
CYAZYPYR®

DuPont™ Exirel® insect control is a groundbreaking product from DuPont that provides protection from insect pests for a stronger crop in the field to maximize the opportunity for better results at harvest.

Exirel® is powered by Cyazypyr®, 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®

- 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

DuPont™ Exirel® insect control

Active ingredient name: Cyantraniliprole

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: 1 day

Short REI: 12 hours

* Contact your DuPont representative for the list of crops registered in the Reduced Risk Pesticide Program.

Designed for foliar applications

Exirel® 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® improves the opportunity for better yield and quality at harvest. Exirel® is not labeled for use as a soil treatment. For soil applications of Cyazypyr®, see the DuPont™ Verimark® insect control label.

DuPont™ Exirel® use rates — cucurbit vegetables (EPA Group 9)

Rate range (fluid ounces product per acre)	Pest spectrum	PHI (preharvest interval) (days)	REI (reentry 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® helps maintain whitefly populations below damaging levels.

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



Silverleaf whitefly (*Bemisia tabaci*)

- On melons treated with Exirel®, 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®.

Figure 1.

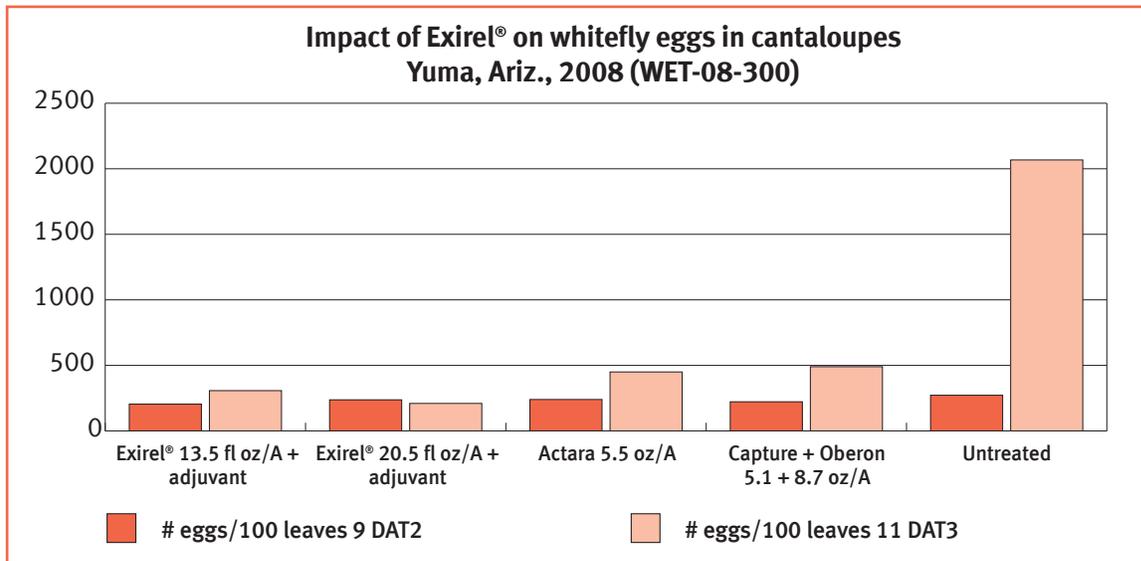
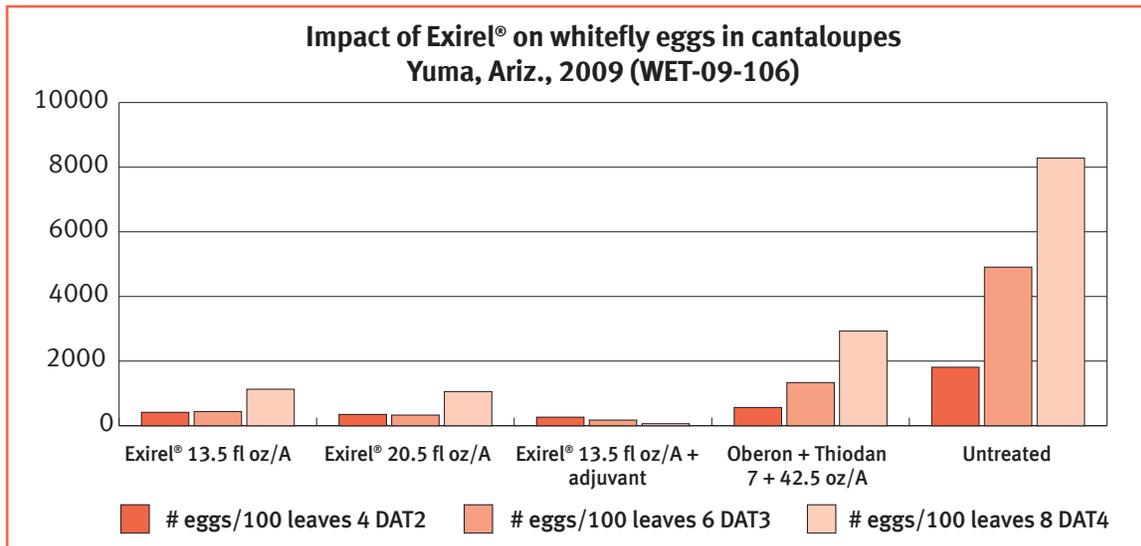


Figure 2.



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 8 hours before spraying. Do not store the spray mixture overnight in the spray tank.

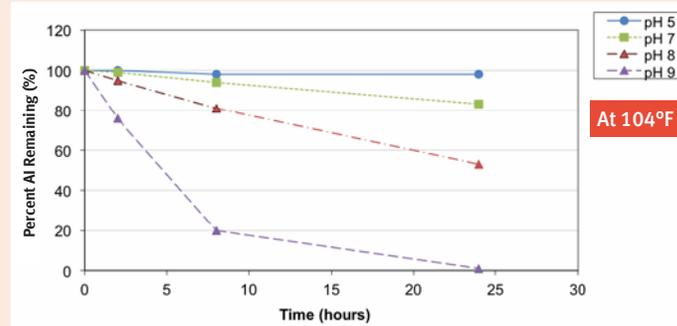
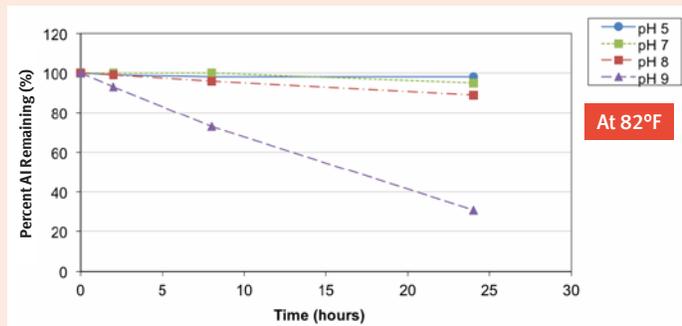
Compatibility: Since formulations may be changed and new ones introduced, premix a small quantity of a desired tank mix and observe for physical incompatibility (settling out,

flocculation, etc.). Avoid mixtures of several materials and very concentrated spray mixtures.

Exirel® 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®: Handling characteristics

Chemical stability of Exirel® 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 adjuvant when used with Exirel®⁰¹

¹ DuPont 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	Green	Yellow	Green
Blends (methylated seed oil + nonionic + organosilicone) Same as MSO, but better spreading	Best	Green	Yellow	Green
Vegetable oils Variable spreading and wetting properties, depending on quality and amount of surfactants added; low solubilization/penetration to cuticle	Good-moderate	Green	Yellow	Light Green
Petroleum oils Same as MSO, but not good solubilizers	Good	Green	Yellow	Green
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	Green	Yellow	Light Green
Nonionic Good spreading and wetting, but not good solubilization; limited help with leaf penetration, primarily via stomates	Moderate	Green	Yellow	Light Green
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	Green	Yellow	Red

Green = Best Light Green = Good Yellow = Moderate Red = Poor

Maximum Residue Levels (MRLs)

DuPont™ Exirel® is registered with the EPA and has received registrations in most states. DuPont is establishing MRLs in key countries of export to facilitate ease of trade for our customers. For updates to MRL status, please refer to the Global Database (globalmrl.com). For any specific MRL-related questions on Exirel® to support your crop export management decisions, please contact your local DuPont representative or email DuPont™ SmoothTrade™ Solutions at SmoothTrade@dupont.com.

Best Management Practices

Because Exirel® 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).

Learn more.

Contact your local DuPont retailer or representative to learn how you can produce a more appealing crop at harvest with Exirel® insect control from DuPont. Visit us at exirel.dupont.com.

The EPA-registered label contains the statement, "DuPont™ Exirel® is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow to drift to blooming crops or weeds if bees are foraging (actively visiting) in the treatment area."

Capture is a restricted-use pesticide.

DuPont™ Exirel® may not be registered for sale or use in all states. Contact your DuPont retailer or representative for details and availability in your state.

This reference guide is not intended as a substitute for the product label for the product(s) referenced herein. Product labels for the above product(s) contain important precautions, directions for use, and product warranty and liability limitations, which must be read before using the product(s). Applicators must be in possession of the product label(s) at the time of application. Always read and follow all label directions and precautions for use when using any pesticide alone or in tank-mix combinations.

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Actara® (Syngenta); Capture® (FMC); Oberon® (Bayer).

Reorder No.: K-29496