



## BED BUGS AND GENERAL PEST CONTROL

# ER-22<sup>TM</sup> (CONCENTRATE) & RTU<sup>TM</sup>

- ▶ Adulticide + Ovicide
- ▶ Combats Resistance Issues
- ▶ Better Performance, Higher Productivity!



**EcoRaider**<sup>®</sup>

# EcoRaider® Bio-Insecticide

## Highly Efficacious

- ▶ Fast kill, high mortality and assured result
- ▶ Unrivaled efficacy against eggs and resistance
- ▶ Immediately cuts down biting incidence
- ▶ Kills all bed bug stages inclusively
- ▶ Outperforms traditional pesticides

## Green & Natural Ingredients

- ▶ Minimum risk and low environmental impact
- ▶ Minimum prepping and no vacating
- ▶ No signal word and no warning
- ▶ Pets and children friendly
- ▶ Use in all environments, even sensitive accounts

## Extended Residual Control

- ▶ Lab proven 14-day residual activity
- ▶ Extended control on newly-hatched
- ▶ Continually cuts down biting incidence
- ▶ Complementary to heat or steam treatment
- ▶ Reduces revisits and repeat treatment.

## Highly Versatile

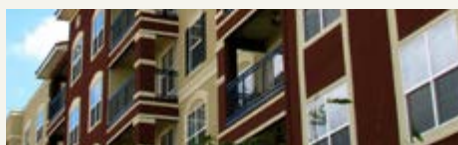
- ▶ Low-odor and non-staining
- ▶ Use on all furnishing including mattress
- ▶ Use alone or in conjunction with other methods
- ▶ Return premises back to service quickly
- ▶ All IPM programs compatible

## USE IN ALL ENVIRONMENTS, EVEN SENSITIVE ONES

"Sensitive" accounts can often be difficult to treat efficiently. Because EcoRaider® is low-risk, low-odor and a non-staining formula, it can be applied anywhere. For use in schools, daycares and any other sensitive environments. No prior notification is necessary. Your "sensitive" accounts can be treated effectively with a green, botanical product.



**HOMES**



**APARTMENTS**



**HOTELS / MOTELS**



**COLLEGE DORMS**



**NURSING HOMES**



**OFFICE BUILDINGS**



**DAY CARE CENTERS**



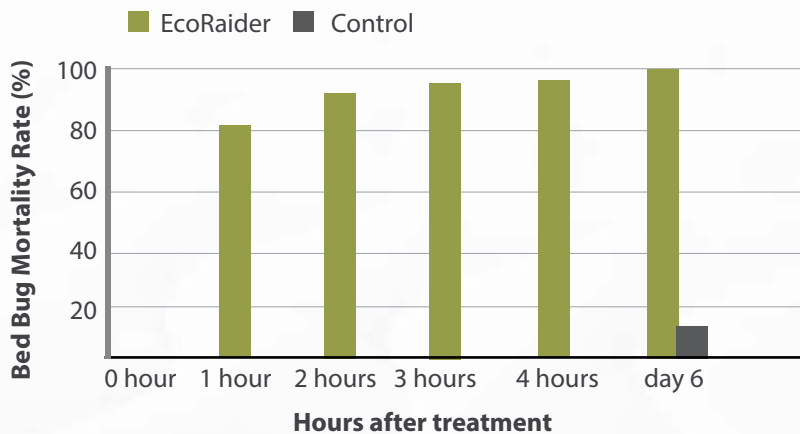
**HOSPITALS / MEDICAL**



**PUBLIC TRANSPORT**

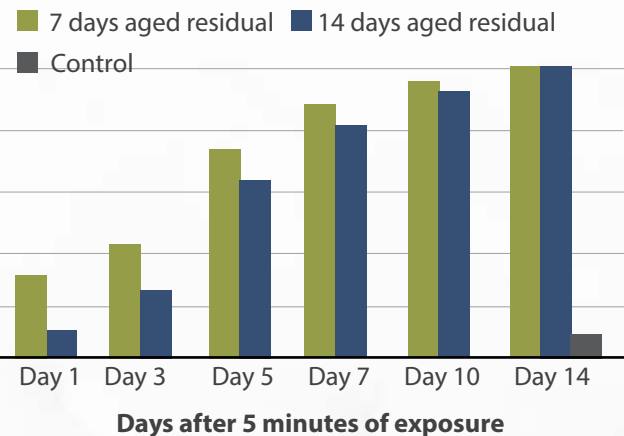
# Fast, Effective, Lasting and **Green.**

## Direct Spray Mortality <sup>1</sup>



- ▶ 80% - 90% control within 1 hour.
- ▶ Kills all bed bug stages: adults, nymphs and eggs.
- ▶ Sure kill with 100% mortality.
- ▶ No compromising on resistant populations

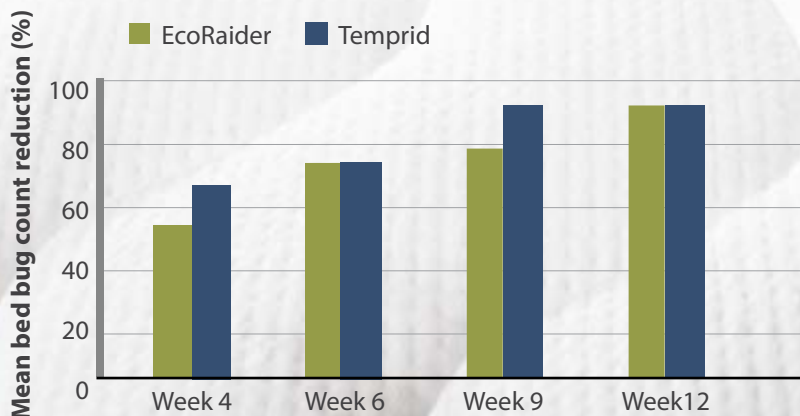
## Dry Residual Mortality <sup>2</sup>



- ▶ Proven 14 days residual activity.
- ▶ 97.5% mortality after 5 min exposure on 14-day dried residual.
- ▶ More than just a contact killer and it is green!

\*1, 2 : Data provided by Rutgers University.

## Bed Bug Reduction in Apartment Complex <sup>3</sup>

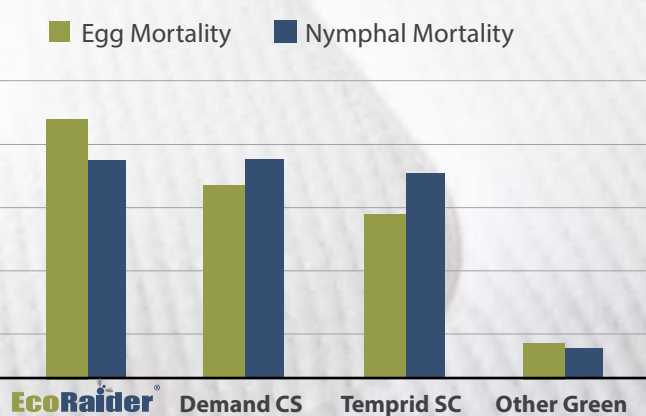


### USDS IR4 field study in a housing complex proven:

- ▶ Similar initial control results as Temprid.
- ▶ Similar bed bug reduction rate.
- ▶ Comparable performance as Temprid against bed bugs.
- ▶ "Most advantageous in sensitive environments."

\*3. Data provided by USDA IR-4 Public Health Pesticide Program

## Bed Bug Egg Mortality



### Entomological Society of America Journal Publication:

- ▶ " Only EcoRaider caused high-level egg mortality at 14 days after treatment."
- ▶ " EcoRaider was significantly more effective than Temprid SC and Demand CS" in killing bed bug eggs.



# EFFECTIVE EVEN ON PESTICIDE RESISTANT BED BUG POPULATIONS!

## Bed Bugs Have Built Resistance:

“Given the prevalence of pyrethroid resistance in field populations, resistance to pyrethroid/neonicotinoid combination products is a concern, especially considering the diverse toxicological defenses inherent in this insect...”

– University of Kentucky Study, January 2014

## EcoRaider® Overcomes Resistance:

EcoRaider® is a botanical based bio-insecticide that attacks receptors that do not exist in vertebrates. It does not contain any synthetic compounds that bed bugs have demonstrated resistance to. Therefore EcoRaider® can be a standalone treatment or part of a rotation program to control resistant bed bug strains while avoiding further resistance problem.

# FIELD PROVE PERFORMANCE!

## Testimonial:

“ We were using conventional chemical products – we tried many things and none were getting it under control and we were treating every two weeks. Once we started using EcoRaider we saw a difference immediately...I'd say within a few weeks we saw a drastic reduction in the bed bug population. We haven't seen a bed bug in the shelter itself in months – at this point we are spot treating every two weeks with EcoRaider and it's working incredibly.”

— Michele Cruzat, Bed Bug Operations Manager, Eden Advanced Pest Technologies, Seattle, WA



**SCAN & WATCH**  
demo video

**EcoRaider®**

# Is My Bed Bug Treatment Effective?



## Study Shows How Feeding Availability Helps Bed Bugs in Detoxing

Rutgers University studied the impact of blood feeding to the effectiveness of insecticides and discovered that the effect of post-treatment feeding on bed bug mortality varied among different insecticides.

“The increased tolerance in large bed bug nymphs and adult males to insecticides after feeding suggests the role of feeding in stimulating detoxification enzymes responsible for insecticide resistance.”

In natural environments, bed bugs have daily access to hosts after they are exposed to insecticides. A post-treatment feeding significantly reduced bed bug mortality.

— Reference: *Posttreatment Feeding Affects Mortality of Bed Bugs (Hemiptera: Cimicidae) Exposed to Insecticides*, Narinderpal S. et al., Dept of Entomology, Rutgers University, *Journal of Economic Entomology*, Oct., 2015

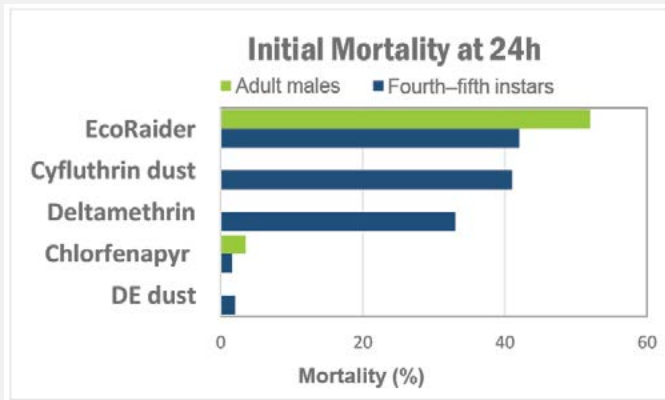
**EcoRaider**<sup>®</sup>

Fast, Effective, Lasting and Green

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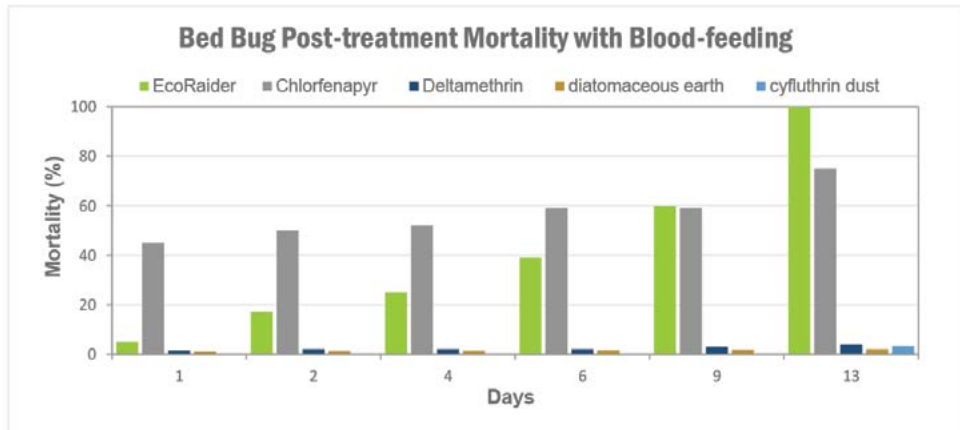
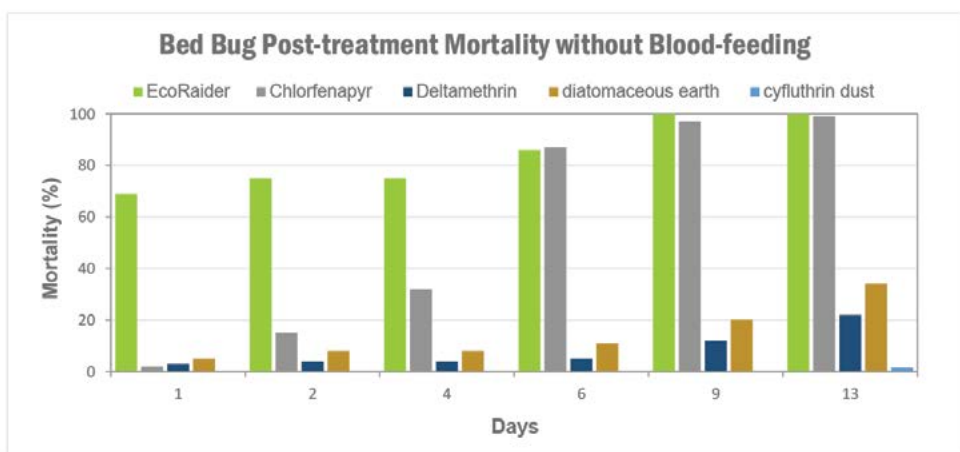
# Is My Bed Bug Treatment Effective?



The study started with two bed bugs field strains, Indy strain and Bayonne strain, directly treated with selected pesticides. Their initial mortality after 24 hours is shown on the left for each pesticide.

The surviving bed bugs were then split into two groups — blood feeding and non-fed. The impact of blood feeding to the effectiveness of insecticides was evaluated. The result showed that the effect of post-treatment feeding on bed bug mortality varied among different insecticides.

**“EcoRaider acted as a relatively fast-acting insecticide.”**  
*— Narinderpal S. et al., Rutgers University, Journal of Economic Entomology, Oct., 2015*



## The Rutgers study indicates:

- ▶ Post-treatment blood feeding has significant impact on the performance of many insecticides.
- ▶ A recent blood meal increases levels of detoxifying enzymes to become more resistant.
- ▶ PMPs should choose a right tool that is less affected by detoxification.
- ▶ Post-treatment does not affect EcoRaider’s final mortality.
- ▶ EcoRaider shows the highest in final mortality among all tested in fed and non-fed groups.

**EcoRaider**®

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# An Effective, Green Solution for **MINIMUM-RISK** Bed Bug Control

**D**esigning and implementing bed bug management programs in commercial accounts, including senior housing, health-care facilities and multi-family apartment units, is not an easy task. There are multiple variables a pest professional must consider when selecting products and treatment techniques to eliminate bed bugs in these types of accounts.

In sensitive accounts, variables include the medical condition of residents/patients, access to infested units, clean and sterile room environments, and restrictions on pesticide usage.

In multi-family apartments PMPs have to consider the highly mobile nature of bed bugs (which move from unit to unit), the transitory nature of residents and guests coming and going, and access to units to perform inspections and treatments.

Any of these factors can dramatically influence how pest management professionals approach bed bug management in sensitive accounts.

## A COSTLY PEST

While bed bugs may not pose the health threat that cockroaches, stinging insects and rodents do to residents and patients, their mobility and the annoying bites they leave behind make them an unwanted pest in sensitive accounts.

Recently a jury awarded a North Carolina woman \$100,000 in compensation for bed bug bites and the accompanying stress she experienced after staying in a bed bug-infested room at national hotel chain. The woman awoke with welts on her arms

and hands after spending one night in the hotel.

The jury found the hotel negligent for failing to check that the room was free of bed bugs before renting it to her. The property had previously experienced and treated for bed bugs.

This case demonstrates the significant economic impact bed bugs can have on commercial facilities. From costly litigation and brand damage to loss of revenue when apartments go unrented, bed bugs are not only annoying but they are costly.

## AN EFFECTIVE TOOL

Pest management professionals are inundated with bed bug technology. From heat treatments and traditional pesticides to physical barriers and bed bug-resistant pajamas, the arsenal of bed bug products PMPs have at their disposal seems to grow on a daily basis.

Bill Hastings, director of specialty services for Rose Pest Solutions in the Windy City of Chicago, the nation's number one bed bug infested city, services numerous sensitive accounts



A pest management professional spraying the back of a couch with EcoRaider to protect it from bed bugs. EcoRaider is a minimum-risk, green solution for bed bug control.

and apartment/condominium complexes for bed bugs and is always on the lookout for products that will help Rose win the fight against this pervasive pest.

When a sales representative dropped off several bottles of EcoRaider® Bed Bug Killer spray, a botanical bio-insecticide, Hastings was skeptical.

"I gave it to several of our technicians to use and their feedback was, 'We want more of this stuff,'

which is usually a sign it works," says Hastings. "I went out and tested it myself and had bed bugs dying four to six seconds after coming in contact with the product which impressed me."

The positive results resulted in EcoRaider becoming a protocol product for Rose Pest Solutions, which means the company's dozen bed bug teams now have it as part of their standard bed bug toolbox.

The product — which is EPA exempt — provides Rose Pest Solutions' technicians with flexibility since it can be applied to mattresses, couches, drapes and furniture as a complement to the company's other bed bug service options.

"It acts quickly and fits into our integrated approach to bed bug management that includes heat and conventional pesticide treatments," says Hastings. "We take it with us on our inspection visits and if we spot bed bugs can we apply it to stop the spread of



Two pest management professionals inspect and treat a mattress with EcoRaider to eliminate and prevent a bed bug infestation.



The Ecology Environmental Pest Control team prepares to fight a New York bed bug infestation using EcoRaider.

the infestation and provide the customer with some immediate emotional relief.”

Hastings says EcoRaider is particularly effective in assisted living facilities where moving patients can be problematic due to their medical conditions.

“Conventional treatments typically require moving the patient out of the room overnight and that isn’t always easy or even possible,” says Hastings. “With EcoRaider we can make the application and the patient can be back in the room later that day. It relieves stress and hassle for both the patient and facility.”

Michele Cruzat, bed bug operations manager for Eden Advanced Pest Technologies, a Rentokil company, agrees that using EcoRaider in group housing has paid big dividends. Her team used EcoRaider to

control bed bugs in a local shelter.

“Using EcoRaider made a huge difference for us,” she said. “We were using conventional chemical products — we tried many things and none were getting it under control and we were treating every two weeks. Once we started using EcoRaider we saw a difference immediately.

“I’d say within a few weeks we saw a drastic reduction in the bed bug population. We haven’t seen a bed bug in the shelter itself in months — at this point we are spot treating every two weeks with EcoRaider and it’s working incredibly.”

EcoRaider also has proven its mettle in multi-unit housing complexes, which Chicago has plenty to spare. Hastings points to a six-unit apartment building that had a bed bug infestation so

severe, the owner wouldn’t enter the building.

With infestations in each unit — more than 1,000 bed bugs were discovered roaming around one apartment — Rose applied EcoRaider and used vacuums to knockdown the population during weekly service calls. A heat treatment was then performed to eradicate the infestation.

“We are able to apply EcoRaider while setting up the heat treatment equipment and achieve a greater degree of control,” says Hastings. “The product is a nice complement to heat treatments because we can apply it on the same day and it doesn’t interfere with the efficacy of the heat.”

#### MINIMUM RISK, MAXIMUM SUCCESS

In Southern California, Bill Smale, president of IV Termite & Pest Control in El Centro, says EcoRaider’s flexible label make it a valuable tool in the company’s bed bug treatment protocols.

“We use the product mainly in apartment buildings and homes, and have had good success so far,” says Smale. “We are able to apply it directly to mattresses, drapes, furniture and it is the only product we can use on walls. It gets right to where the

bed bugs live.”

Smale uses the minimum risk product exclusively in residential settings where it’s favored by his customers, he says.

“Using a minimum risk product appeals to residential customers concerned about their family or pet’s exposure to traditional pesticides and that helps give them peace of mind,” says Smale.

PMP Arnold Castro, owner of Ecology Environmental Professionals in New York City, also uses the product because of its environmentally friendly label. “I focus on eco-friendly products and EcoRaider was superior to other products because it had so many more advantages than other standard products,” he said. “It doesn’t leave stains and we use it on everything: wood, plastic, any surface.”

“There are other products that are effective and they leave stains or they might damage a surface. We find EcoRaider doesn’t do that so it’s a big difference from other products,” he added. “You’re using a product with EcoRaider that’s eco-friendly and yes you’re leaving a residue but this is all natural.”

EcoRaider also fits nicely into Rose Pest Solutions’ preventive bed bug programs, which Hastings sees growing in popularity as bed bug pressure in and around Chicago continues to increase.

“With commercial accounts it is all about the budget,” says Hastings. “Preventative programs appeal to apartment and condominium management companies since units that go unrented because of a bed bug infestation yield zero revenue and can cost a company its profit for the year.” ♦



Seattle PMP Michele Cruzat of Eden Advanced Pest Technologies prepares to use EcoRaider on a bed bug job.



# Go **GREEN** Effectively

for Perimeter Ant Control  
with EcoRaider®!

Go **GREEN** effectively & protect your customers with EcoRaider® performance!

EcoRaider® ant control offers fast mortality, lasting prevention and green in one application.

EcoRaider® is an indoor / outdoor with no caution words, making it ideal for homes with children or pets and other sensitive environments. It can be used in and around anywhere ants are found without restriction.



Residence  
Schools  
Daycare Centers  
Health-Care Facilities

Public Housing  
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Churches and Synagogues  
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**EcoRaider**®

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