# THERMACELL®

# BIODIVERSITY STUDY Prallethrin

Understanding the impact of our Prallethrin products on insects other than mosquitoes.



In 2023, Thermacell Repellents ran a study to learn the effects of Prallethrin products on insects other than mosquitoes to better understand the environmental impacts of the product in the treated area. The test was developed to evaluate whether other insects that venture into the protection zone are killed.

### Do Thermacell Prallethrin products kill insects other than mosquitoes?

"No, our products target mosquitoes with a minute dose of Prallethrin that affects their sensors without having the same mortality effects on other insects. We found almost no dead non-mosquito insects in our study and no difference between the Thermacell treated areas and untreated, control areas, suggesting that Thermacell has **no effect on non-mosquito insects**." – Dr. John Hainze, VP of Science & Research at Thermacell

## VIEW DATA

#### **Methodology:**

The

Test

Four testing plots were set up consisting of one white tarp with a CO<sub>2</sub> emitting source placed in the center. Two plots included an active Thermacell device with a Prallethrin-treated mat. Samples were taken at regular intervals while running and after running the device to measure the rate of among insects other than mosquitoes.



4-hour intervals over 3 days.

#### **Post-Exposure Assessment:**

Rates of mortality among the collected insects were assessed at 0 hours, 12 hours, and 24 hours after the exposure period.



#### **Aerial Station View:**

(High Mosquito Density Area)



**Insect Species** 

#### **Control Plots:**

Two control testing plots were set-up without any Thermacell mosquito control device to confirm that Prallethrin exposure responses could be accurately estimated.

#### **Verification Plots:**

Used collection data from BG-Sentinel traps outside of treatment zone to determine the background abundance of mosquitoes.

#### Conclusion:

The study concludes that Thermacell devices containing Prallethrin mats showed **no significant difference in the rate of mortality to insects other than mosquitoes** within the Thermacell protection zone when compared to control plots.





All insects other than mosquitoes were collected from control and treatment-exposed tarps at nearly an identical rate (2.00 individuals and 1.00 individual per day, respectively; P > 0.05).

This indicates that there is no significant impact on local insect populations other than mosquitoes by operating a Thermacell device using Prallethrin under environmental conditions.

#### Study Reference

McMillan, B. (2023), Impact of Thermacell Mosquito Repellent II (10.86% Prallethrin) on Naturally Occurring Arthropod Populations, Thermacell Repellents, Inc., 26 Crosby Drive, Bedford, MA, 01730, GLP Study Number: TRI-BIO-004, March 24, 2023

