



PROUD 3® Residual Control of Cabbage Looper Larvae (*Trichoplusia ni*)

Research Report

SNELL Scientifics, LLC

Summary

Along with an untreated control 2 test pesticides were applied to leaves separately and left to dry for 24 hours. Then 10 alive cabbage looper larvae per trial were left on the leaves for various time intervals and the number of alive, knocked down, and dead insects was recorded.

Purpose

To determine the efficacy of HUMA GRO® PROUD 3® to control cabbage looper larvae (*Trichoplusia ni*) when applied as residual treatment to collard (*Brassica oleracea var. viridis*) plant leaves with cabbage looper larvae.

Description

Test substances were: Control – Untreated, HUMA GRO® PROUD 3®, and Ortho® MAX Garden & Landscape Insect Killer

Treatment surfaces were positioned on a cleaned tray into sets of 4 (control and trials for pesticide treatments) using HUMA GRO® PROUD 3® and Ortho® MAX Garden & Landscape Insect Killer. Plant leaves (2 leaves per trial) were placed on clean trays and both sides of the leaf were sprayed with each pesticide and then allowed to dry for 24 hours. The control leaves were left alone. Ten alive insects were transferred to each tray. The process was replicated 4 times to ensure accuracy. The number of dead, knocked down, and alive insects per surface was recorded at 30 min, 1 hr, 2 hr, 4 hr, 24 hr and daily time intervals for two days. Then averages were

Definitions

Alive: Insects exhibit forward motion

Knocked Down: Insects exhibit some movement, but cannot crawl

Dead: Insects exhibit no movement even when stimulated

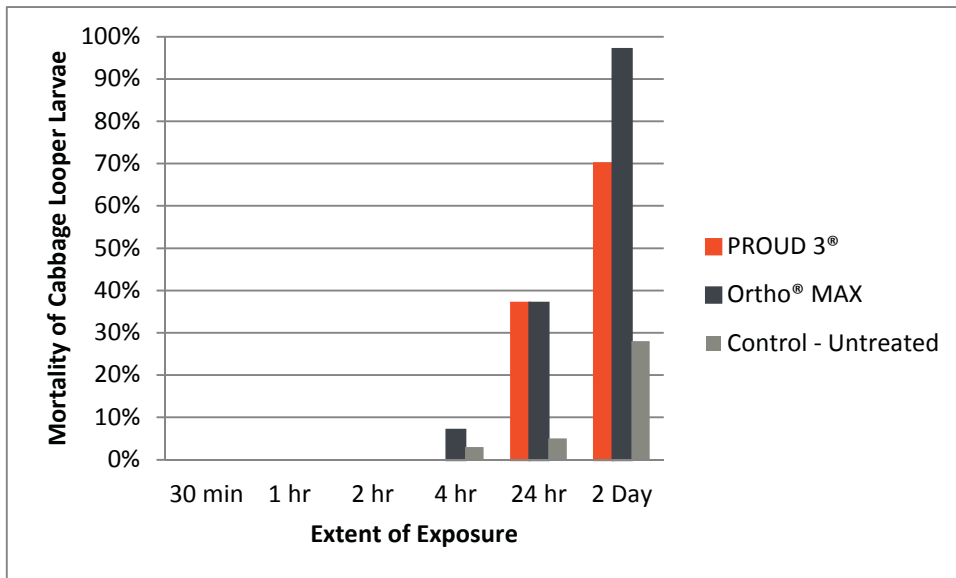
Results

Residues of both PROUD 3® and Ortho® MAX trials caused 37% mortality after 24 hours after exposure. After 2 days, due to exposure to pesticide residues the mortality rates increased to 70% (PROUD 3®) and 97% (Ortho® MAX). Mortality of the untreated control increased to 28% mortality after 2 days. Although residues of PROUD 3® did not show complete control, the results indicate PROUD 3® has a residual impact on mortality of cabbage looper larvae when exposed to pre-treated leaves.

Average % Mortality of Cabbage Looper Larvae of Untreated Control and Residues of PROUD 3® and Ortho® MAX After Exposure

Treatment	30 min	1 hr	2 hr	4 hr	24 hr	2 Day
Control - Untreated	0%	0%	0%	3%	5%	28%
PROUD 3® Residue	0%	0%	0%	0%	37%	70%
Ortho® MAX Residue	0%	0%	0%	7%	37%	97%

Average Cabbage Looper Larvae Mortality, Percent



Conclusion

Residues of HUMA GRO® PROUD 3® on collard plant leaves provided 70% control of cabbage looper larvae after 2 days. PROUD 3® is an organic, safe pesticide that works best on juvenile or soft bodied insects as a contact material. Thus the 70% mortality from residual PROUD 3® on Cabbage Looper Larvae indicates that the less toxic, safer PROUD 3® is an effective option.

Full research report available upon request.

PROUD 3® organic pest control is a safe, effective, organic foliar applied bactericide, insecticide, miticide and fungicide when applied using recommended methods and rates. PROUD 3® is OMRI-listed for organic farming.



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Highly Efficient and Effective Due to Our Unique Delivery



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