



Direct Application of PROUD 3[®] Controls Potato Aphids (*Macrosiphum euphorbiae*)

Research Report

SNELL Scientifics, LLC

Summary

Along with a control trial, 3 test pesticides were directly sprayed onto different groups of 10 potato aphids per trial. At 1 hour after exposure, the insects were moved to a clean, contained area. At various time intervals the number of alive, knocked down, and dead insects was recorded.

Purpose

To determine the efficacy of HUMA GRO[®] PROUD 3[®] when applied as direct spray applications to potato aphids (*Macrosiphum euphorbiae*).

Description

Test substances were: Control – Untreated, HUMA GRO[®] PROUD 3[®], Ortho[®] MAX Garden & Landscape Insect Killer, and Garden Safe[®] Insecticidal Soap Insect Killer.

Direct spray cartridges were positioned in groups of 4 replicates for each product treatment type and the control to ensure accurate data collection. Ten insects were transferred to each cartridge and confirmed to be alive and mobile before all treatments. Each treatment was set up 12 inches away from the cartridges. The test products were directly sprayed on the insects using 1 trigger pull per cartridge. The number of dead, knocked down, and alive insects per cartridge was recorded at 30 min, 1 hr, 2 hr, 4 hr, and 24 hr intervals. At 1 hour, the insects were transferred from the treatment cartridges into clean post-treatment cartridges.

Definitions

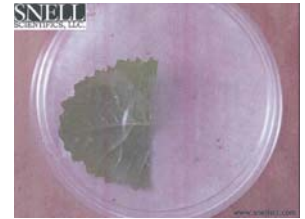
Alive: Insects exhibit forward motion

Knocked Down: Insects exhibit some movement, but cannot crawl

Dead: Insects exhibit no movement even when stimulated



Potato Aphids in 1.75" CPVC Cartridge



Potato Aphids in Post-Treatment Arena

Results

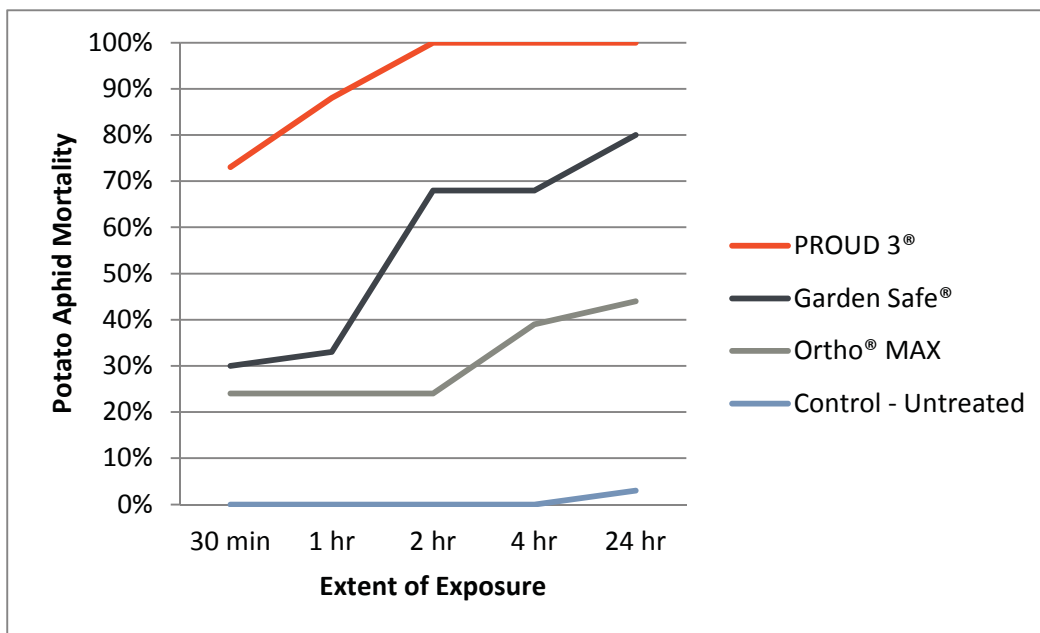
HUMA GRO[®] PROUD 3[®] provided the highest mortality in comparison to the Ortho[®] MAX Garden & Landscape Insect Killer and the Garden Safe[®] Insecticidal Soap Insect Killer products. **PROUD 3[®] reached 100% mortality by 2 hours**, while Ortho[®] MAX and Garden Safe[®] only reached 44% and 80% within 24 hours after applications, respectively.

HUMA GRO[®] PROUD 3[®] was significantly better than the competition throughout all evaluations. Therefore HUMA GRO[®] PROUD 3[®] is an effective pesticide when applied as a direct spray application method to potato aphids.

Average Potato Aphid Mortality

Treatment	30 min	1 hr	2 hr	4 hr	24 hr
Control - Untreated	0%	0%	0%	0%	3%
PROUD 3 [®]	73%	88%	100%	100%	100%
Ortho [®] MAX	24%	24%	24%	39%	44%
Garden Safe [®]	30%	33%	68%	68%	80%

Average Potato Aphid Mortality, Percent



Conclusion

HUMA GRO® PROUD 3® killed more aphids than did the competition throughout all evaluations. Therefore, HUMA GRO® PROUD 3® is an effective pesticide when applied as a direct-spray to control potato aphids. Twenty-four hours after the treatments were applied, mortality of the potato aphids treated with HUMA GRO® PROUD 3® was 2.3 times greater than mortality with Ortho® MAX and was 1.25 times greater than mortality with Garden Safe®.

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.



Our HUMA GRO® Products Are
Highly Efficient and Effective Due to Our Unique Delivery



If you would like to learn more about this top quality product, contact us directly at 480-423-6805 or visit our website at www.humagro.com.