University of Guam Coconut Rhinoceros Beetle Biological Control Project
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https://github.com/aubreymoore/rearing3

Bioassay Report: V23B_perOSIN

Aubrey Moore and James J. Grasela
University of Guam Coconut Rhinoceros Beetle Biocontrol Project

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https://github.com/aubreymoore/rearing3/raw/master/bioassay-V23B%5C_perOSIN.pdf

Contents

1 Summary

Table 1: Bioassay summary.

	bioassay_name	date_start_bioassay	date_end_bioassay	bioassay_treatment	N
0	V23B_perOSIN-1	2019-03-05	2019-05-31	control	6
1	V23B_perOSIN-1	2019-03-05	2019-05-31	heat-inactivated	5
2	V23B_perOSIN-1	2019-03-05	2019-05-31	virus	5

Fifteen adult beetles maintained for more than 2 weeks to observe possible contamination from green muscardine fungus infection were employed in a preliminary test to determine the susceptibility of adult beetle to infection by virus V23B isolate (Solomon Islands). Each of 15 beetles (5/virus isolate) were injected with 1 - 2 ul of virus preparation with a sterile 1 ml pipette w/ 30cc needle tip. Adults were then placed individually in clean glass mason jars (bleached-treated) , sphagnum moss and with a piece of banana added for food. Beetles were incubated at 300C and 80

2 Mortality

Table 2: Mortality summary.

	bioassay_treatment	ntotal	ndead	mortality	adjusted_mortality	significance
0	control	6	0.0	0.0	0.0	1.000000
1	heat-inactivated	5	0.0	0.0	0.0	1.000000
2	virus	5	3.0	0.6	0.6	0.060606

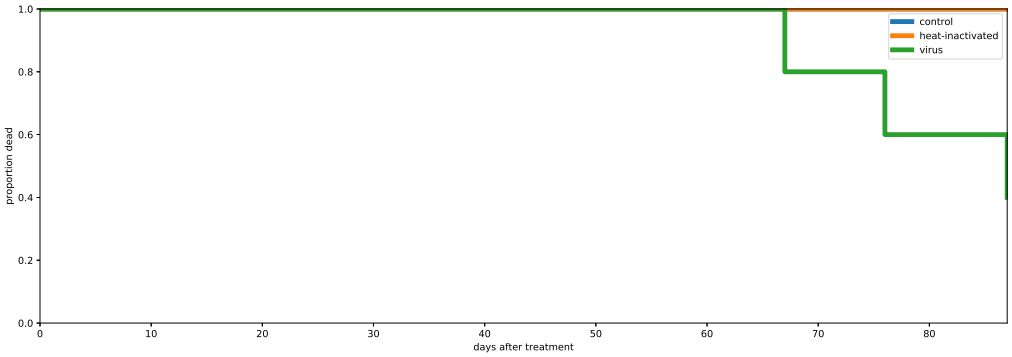

Table 3: Pairwise differences among mortality curves.

		test_statistic	p
control	heat-inactivated	0.000000	1.000000
	virus	4.624030	0.031527
heat-inactivated	virus	3.862042	0.049390

3 Change in Mass

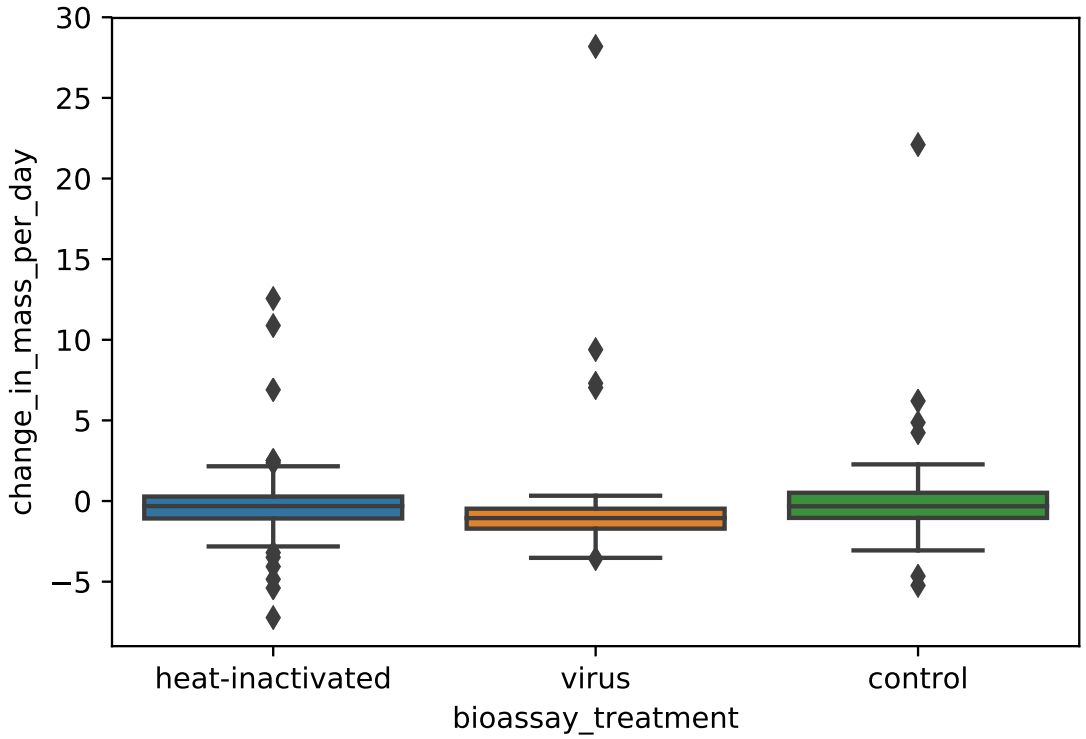

Table 4: Results of pairwise significance tests for differences in change in mass.

	control	heat-inactivated	virus
control	-1.000000	0.514964	0.002272
heat-inactivated	0.514964	-1.000000	0.012039
virus	0.002272	0.012039	-1.000000