



Dr. Brett Nolan PhD

June 22, 2016

### **Dergall Mortality Test for Darkling Beetle, *Alphitobius diaperinus***

Below are the preliminary mortality results for Dergall against Darkling beetles. Beetles were housed in 15cm petri dishes (Picture #1). Treatment was applied in a fine mist at the recommended label rate of approximately 0.719mL of finished product per dish. The 0.15% concentration treatment was treated at about half this rate. Preliminary results show that Dergall is effective against darkling beetles at both the 0.3% and 0.6% concentration using the recommended rate. The concentration of 0.15% was moderately effective at the rate tested.

There is little residual effect of the insecticide as the 48-hour mortality was similar to the 3-hour mortality.

#### **3 hours post treatment**

<b>0.15% Solution</b>	<b>% mortality</b>
Dish 1	60%
Dish 2	43%
Dish 3	32%
Dish 4	24%
Dish 5	27%
Average Mortality	37%

<b>0.30% Solution</b>	<b>% mortality</b>
Dish 1	100%
Dish 2	100%
Dish 3	100%
Dish 4	100%
Dish 5	100%
Average Mortality	100%



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<b>0.60% Solution</b>	<b>% mortality</b>
Dish 1	100%
Dish 2	100%
Dish 3	100%
Dish 4	100%
Dish 5	100%
Average Mortality	100%

<b>Control</b>	<b>% mortality</b>
Dish 1	0%
Dish 2	0%
Dish 3	0%
Dish 4	0%
Dish 5	0%
Average Mortality	0%

48-hour post treatment

<b>0.15% Solution</b>	<b>% mortality</b>
Dish 1	80%
Dish 2	71%
Dish 3	54%
Dish 4	36%
Dish 5	26%
Average Mortality	53%



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<b>Control</b>	<b>% mortality</b>
Dish 1	15%
Dish 2	20%
Dish 3	11%
Dish 4	6%
Dish 5	22%
Average Mortality	15%

Picture #1

