Soil Technologies Corp.
Research and Development Department

Research Report

Title: Preliminary Experiments on Armorex for the Control of *Melolontha melolontha*, White Grub

Location: Germany

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Crop: N/A

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Abstract:
The purpose of this study is to evaluate the potential of Armorex[1] in controlling populations of young (L2) and old (L3) white grubs of the *Melolontha melolontha.* In the first experiment, the larvae were dipped for about 15 seconds in the solutions, and, in the second experiment 1mL or 2 mL of the various concentrations were given on the surface of soil (about 50 cm^3) in small plastic pots, while the larvae were on the bottom. In the dipping experiment, all L2 were dead at 2% and 4% concentrations after one week, while the L3 were still living. However, in the soil treatment experiment all grubs were dead after one week even at 0.5 % concentration.

Methods:
Dipping Experiment
Young and old larvae were dipped in the solutions (0.5, 1, 2, and 4 % of an Armorex solution) for 15 seconds. After one week, the larvae were evaluated for mortality.

Soil Treatment
Small plastic pots were filled with soil with larvae in the bottom of the pots. One to two mL of the various concentrations (0.5, 1, 2, and 4 % of an Armorex solution) of the Armorex solution was applied to the surface of the soil in the pots. After one week, the pots were evaluated for larvae survival.

[1]Armorex is a botanical OMRI listed pesticide manufactured by Soil Technologies Corp. in Fairfield, IA USA

Results:

Dipping Experiment

All young larvae (L2) were dead one week after being dipped in 2% and 4% concentrations of Armorex while the older larvae (L3) larvae were still living.

Soil Treatment

In the soil treatment experiment all grubs (L2 and L3) were dead after one week, (sometimes already after three days) even at 0.5% concentration.

Conclusions:

These preliminary experiments demonstrate that Armorex has caused a high mortality rate in *Melolontha melolontha* larvae using the soil treatment method. The dipping method demonstrated a high mortality rate in young larvae while the older (L3) larvae were still alive one week after treatment.