

Subsurface Treatments of Insecticides for Control of White Grubs in Nursery Crops

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Figure 1. Subsurface applicator, note the six nozzles.



Figure 2. Applicator in use.

- In 2003, we tested a multi-point subsurface applicator for delivery of insecticides to the root zones of field-grown nursery crops (Figure 1).
- Insecticides were applied by this applicator to serviceberry and crabapples for control of exotic white grubs (Figure 2).
- There was a preventive timing trial where a treatment of Marathon II (imidacloprid) was applied to serviceberry.
- There was also a rescue timing trial where treatments of Dursban or Talstar were applied to crabapples.
- Some trees were left untreated in both trials for comparison.
- The trials were evaluated by digging the plants out and breaking up the root balls to search for grubs (Figure 3).
- The average number of grubs per plant was high in both trials and almost all the grubs were oriental beetle (Table 1).

Table 1. Results of subsurface trials

Trial	Insecticide	Mean live grubs per tree	% Reduction of grubs
Preventive	Marathon II	13.4 a	40%
	Untreated	22.3 b	
Rescue	Talstar T & O	7.8 a	59.8%
	Dursban TNP	8.8 a	54.6%
	Untreated	19.4 a	



Figure 3. Subsurface trial evaluation

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