

**EVALUATION OF SOIL APPLIED AND SEED TREATMENT INSECTICIDES AND YIELDGARD®
CORN ROOTWORM TECHNOLOGY FOR CONTROL OF CORN ROOTWORM LARVAE, 2004.**

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Thirteen insecticide treatments and a YieldGard® Rootworm Hybrid (Dekalb DKC60-05 YGRW) were evaluated for their efficacy against corn rootworm larvae at the OARDC Western Branch Station near South Charleston, OH. The plots were planted in an area that was planted to sweet corn in late June in 2003. The insecticides were applied at planting on 28 April to two rows (30 inch spacing) by 140 ft long plots arranged in a RCBD with four replicates per plot. All of the insecticide treatments were applied to the corn hybrid Dekalb 59-08, an isolate of Dekalb DKC60-05 YGRW. Four granular insecticides (Aztec 2.1G, Force 3G, Fortress 2.5G and Lorsban 15G) were applied either in-furrow (IF) or T-banded (TB) with a modified Noble applicator that was calibrated to deliver the desired rate. Two granular insecticides (Aztec 4.67G and Fortress 5G) were placed either in-furrow (IF) or T-banded (TB) with a SmartBox metering system calibrated to deliver the desired rate. The liquid insecticides Capture 2EC and Lorsban 4E were applied as a T-band (TB) with a CO₂ calibrated sprayer using a TeeJet 650067 nozzle calibrated to deliver 5 gal/ace. The liquid insecticide Regent 4 SC was applied in-furrow (IF) through a CO₂ charged microtube calibrated to deliver 5 gal/acre. The seed treatment insecticides, Cruiser 5FS and Poncho 1250, were commercially applied to the seed before planting. Rootworm feeding injury was evaluated on 6 July by randomly digging 5 roots per replicate for each treatment. Roots were washed, examined for corn rootworm larval feeding injury and rated in accordance with the 1-6 “Traditional” scale and the 0-3 Node Injury Scale.

All of the treatments had significantly less root injury than the untreated check. There were significant differences among the treatments. Plots were not harvested this fall because of heavy stand damage by common stalk borers in June.

Table 1. Root rating observed in continuous corn trial.

Treatment	Rate	Node-Injury Scale (0-3)	1-6 “Traditional” Scale
Aztec 2.1G	6.7 oz/1000’ TB NB	0.16 a	2.60 ab
Aztec 4.67G	3 oz/1000’ TB SB	0.35 ab	2.95 abcd
Capture 2EC	0.37 oz/1000’ TB NZ	0.64 bc	3.40 d
Cruiser 5FS	1.25 mg ai/kernel	0.87 c	3.50 d
Empower ²	8 oz/1000’ TB NB	0.48 abc	2.90 abcd
Empower ²	8 oz/1000’ IF NB	0.68 bc	3.30 cd
Force 3G	4 oz/1000’ TB NB	0.18 a	2.40 ab
Fortress 2.5G	7.4 oz/1000’ IF NB	0.34 ab	2.75 abc
Fortress 5G	3.7 oz/1000’ IF SB	0.32 ab	2.80 abc
Lorsban 15G	8 oz/1000’ TB NB	0.31 ab	2.85 abcd
Lorsban 4EC	2.4 oz/1000’ TB NZ	0.41 ab	3.00 bcd
Poncho 1250	1.25 mg ai/kernel	0.41 ab	2.95 abcd
Regent 4 SC	0.24 oz/1000’ IF MT	0.18 a	2.75 abc
YieldGard Rootworm	Dekalb DKC60-05	0.10 a	2.30 a
Untreated		1.36 d	4.20 e

TB SB = T-band through SmartBox, IF SB = In-furrow through SmartBox, TB NZ = T-band through Nozzle, TB NB = T-band through Noble Unit, IF NB = In-furrow through Noble Unit, IF NZ = In-furrow through Nozzle, IF MT = In-furrow through MicroTube.

Means in a column followed by the same letter are not significantly different (P = 0.05).