

USE OF XXPIRE IN CONTROL OF *CHRYSOMELA SCRIPTA* IN HYBRID POPLARS

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Cottonwood leaf beetle, *Chrysomela scripta* causes significant damage to hybrid poplars in north eastern Oregon. This study was conducted to identify alternative insecticides to neonicotinoids. Beetles overwinter as adults, underneath leaf litter and bark until bud break occurs at which time they begin to mate and feed on young buds and developing leaves. Egg clusters are laid on the bottom of leaves where first instars emerge to feed. Larvae feed on young leaf tissue between veins, reducing total photosynthetic area and tree virility during the growing season. Given a sufficient amount of available food, beetles will complete several generations in a single season.

Two different chemicals were applied to a three year old block of poplar plantings on August 6, 2015. Leaves were collected on August 7, 2015 for placement in a forced feeding trial. Each assay held two, young, fully expanded leaves and 10 larvae, all of medium size, collected simultaneously from untreated areas. Beetle larvae were placed in each container by use of larval forceps. Inspection of assays for insect mortality occurred at 48 and 96 hours after application.

At the 96 hour mark results were definitive in that all applied chemicals show improved control of the insect compared to the untreated check (Fig. 1). This indicates that both insecticides are acceptable alternatives in the treatment of cottonwood leaf beetle.

Treatment	48 hours after application			96 Hours after application		
	Alive	Dead	Moribund	Alive	Dead	Moribund
Untreated	9.29 a	0.17 a	0.54 b	9.00 a	0.67 b	0.33 b
Coragen	6.92 bc	0.46 a	2.63 a	0.04 b	4.21 ab	5.75 a
Xxpire	5.62 c	1.54 a	2.83 a	0.46 b	5.13 a	4.42 a

Figure 1. Fisher’s LSD of treatments 48 and 96 hours after application out of 10 alive, dead, or moribund. Means followed by different letters are significantly different than each other (P = .05).