

(C2)

BLACKBERRY: *Rubus* hybrid, 'Arapaho'

CONTROL OF EASTERN FLOWER THRIPS, 2004

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Eastern flower thrip (EFT): *Frankliniella tritici* (Fitch)

No compounds are registered against EFT on blackberry so it is necessary to evaluate other formulations for efficacy against this pest on blackberry. In Judsonia, AR, each treatment plot had 10 blackberry crowns spaced 0.45 m apart in rows 4.2 m apart in a RCB design with four replicates. The treatments were: Indoxacarb (Avaunt), Novaluron, Spinosad (SpinTor), Thiacloprid (Calypso), Thiamethoxam (Actara) and an untreated check. On 20 May and 1 June, treatments were applied to the foliage at a rate of 100 gal/acre to achieve runoff using a Solo hand-pump sprayer. Prior to each spray and at 4 DAT on 24 May and 5 Jun, twenty fruit clusters each with four or five berries and one trifoliate leaf were collected randomly from within each plot on 20 and 24 May, and 1 and 5 Jun. These samples were placed in labeled plastic bags and refrigerated until EFT could be counted. Each sample was soaked twice for 10 min. in 70% ethanol in a 1000 ml Erlenmeyer flask, agitated, solution poured into a Buckner funnel and suction filtration was used to draw the ethanol through a porous filter paper (qualitative 417) leaving the EFT on the filter paper. Immediately, a stereo microscope was used to count the number of EFT nymphs and adults per sample on the filter paper. Data are presented as the mean number of EFT nymphs and adults/20 fruit clusters and analyzed using ANOVA and means were separated using WD t-test ($P \leq 0.05$).

On 20 May, the numbers of EFT nymphs and adults/sample were similar across all treatments. By 4 and 11 DAT, all treatments had significantly reduced the number of EFT/sample by > 2.5-fold compared to the untreated check. At 4 DAT after the second application on 1 Jun, Calypso reduced the number to ≤ 1.3 EFT/sample that was significantly less than that for Novaluron, Avaunt and the check but similar to Actara and SpinTor. Actara, SpinTor, Novaluron, Avaunt all had thrips counts that were significantly less than the untreated check.

Treatment/ formulation	Rate amt product/acre	No. EFT nymphs and adults/20 fruit clusters			
		20 May (spray)	24 May	1 Jun (spray)	5 Jun
		0 DAT	4 DAT	11 or 0 DAT	4 DAT
Actara 25WG	4.0 oz	22.3a	3.0bc	4.3b	2.0cd
Calypso 480SC	4.0 fl oz	65.8a	2.5bc	6.3b	1.3d
SpinTor 2SC	6.0 fl oz	53.5a	5.3bc	5.5b	2.5bcd
Novaluron 10EC	14.0 fl oz	36.0a	6.3b	4.0b	4.3bc
Avaunt 30WDG	4.0 oz	45.5a	3.8bc	4.5b	4.5b
Untreated check	---	30.0a	17.3a	16.8a	14.8a

Means for each date followed by the same letter are not significantly different (WD t-test; $P > 0.05$).