

THRIPS CONTROL ON DRY BULB ONIONS

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Onion thrips *Thrips tabaci* Lindeman are the key pest for dry bulb onion production in Washington State. Trials were conducted at three different locations during the 2006 growing season each implementing a complete random block design with four replicates. Plots were two double rows wide and fifteen feet long. Applications were made with a CO₂ backpack sprayer applying 25 gallons per acre water at 35 psi. Plots were evaluated for efficacy by counting the number of adult and immature thrips on the central onion leaf.

The first trial was conducted on 16 June 2006 in Pasco, Washington State in a yellow onion field under rill irrigation. None of the chemistries tested provided thrips control that was significantly different from the untreated check. Thrips abundance was reduced the greatest in the Lannate treatment.

The second trial was conducted on 3 July 2006 in Moses Lake, Washington State in a white onion field under rill irrigation. Due to the extremely high standard error associated with the mean thrips counts in the untreated check, none of the results obtained from this particular trial were significant. Trends in the data will be discussed during the oral presentation.

The third thrips control trial was conducted in a yellow dry bulb onion field near Othello, Washington State under drip irrigation on 27 July 2006. This trial differed from the aforementioned trials in that the plots were larger, 2 double rows by 185 feet, and that only one chemical was compared to the untreated check. The chemical was applied both over the top with a CO₂ powered backpack sprayer like in the treatments above, and chemigated through the drip system with a piston injection pump. Plots were evaluated one and two weeks post treatment to evaluate efficacy of the product. One week post treatment, both the over the top and chemigated treatments of Venom provided significantly better thrips control than did the untreated check. Two weeks post application, none of the treatments varied statistically from the untreated check.

Treatment	Rate/A	Mean Thrips/Onion Plant ± Std. Error	
		One week post treatment	Two weeks post treatment
Lannate SP	0.91 lb. ai	7.0±2.6	13.0±4.2
Mustang Max	4 oz. F	20.75±8.8	29.25±23.8
Pencap M	2 pt F	14.75±2.1	21.75±8.3
Pencap M + Warrior	2 pt F + 0.03 lb. ai	17.5±3.0	17.75±9.1
Success	8 oz. F	19.5±11.7	35.0±18.5
Warrior	0.03 lb. ai	12.75±7.0	20.75±14.6
Untreated Check	NA	15.75±2.2	30.0±14.9

Results from trial at Pasco, WA location. Means followed by * are significantly different from the untreated check (pairwise t-test, P< 0.05)

Treatment	Rate/A	Mean Thrips/Onion Plant ± Std. Error
Assail 30 G	5 oz F + 0.2% NIS	35.33±10.8
Assail 30 G	8 oz F + 0.2% NIS	31.0±10.5
Carzol SP	0.75 lb. ai+0.2% NIS (pH 5)	33.5±27.6
Carzol SP	1.0 lb. ai+0.2% NIS (pH 5)	38.75±18.2
Carzol SP	1.0 lb. ai+0.2% NIS (pH 7)	34.25±17.6
Carzol SP	1.25 lb. ai+0.2% NIS (pH 7)	40.75±24.1
Ecotrol	1.5 pints F	58.0±44.4
Movento 150 OD	8 oz F + 0.1% OSS	50.3±32.75
Movento 150 OD	12 oz F + 0.1% OSS	37.3±19.0
Movento 240 SC	5 oz F + 0.25% MSO	66.0±67.0
Movento 240 SC	5 oz F + 0.2% NIS	71.5±29.0
Movento 240 SC	5 oz F + 0.1% OSS	53.0±28.3
Pencap M	2 pints F	62.5±21.1
Pencap M + Warrior	2 pints F + 0.03 lb. ai	64.5±67.1
Success	8 oz. F	68±61.5
Warrior	0.03 lb. ai	47.5±26.4
Untreated Check	NA	70.75±74.0

Results from trial at Moses Lake, WA. Means followed by * are significantly different from the untreated check (pairwise t-test, P< 0.05)

Treatment	Rate/A	Mean Thrips/Onion Plant ± Std. Error	
		1 week post treatment	2 weeks post treatment
Venom (over the top)	4 oz. F + 0.25% NIS	52.25±16.5*	24.25±8.1
Venom (chemigated)	7.5 oz. F	65.25±16.1*	54.5±25.1
Untreated Check	NA	94.5±25.4	39.5±9.7

Results from trial at Othello, WA. Means followed by * are significantly different from the untreated check (pairwise t-test, P< 0.05)