



Better Together

Neem Oil + Azadirachtin



The combination of Neem Oil and Azadirachtin gives large-scale organic specialty crop growers benefits beyond other products that use either active ingredient alone. There's only one brand on the market that combines these two ingredients into one solution: Debug®.

Neem oil and Azadirachtin are harvested from the same seed but differ in their impact to insect pests. Neem oil acts as a suffocant and discourages insect feeding on treated plants, whereas Azadirachtin can act as an antifeedant and insect growth regulator (IGR). Given the varying modes of action, these active ingredients have also demonstrated activity against mites, plant disease, and nematodes, further expanding the range of pests controlled.

The combination of two active ingredients offers broad-spectrum control against common pests that threaten home gardens, like aphids, thrips, and whiteflies. The advantage comes from having multiple modes of action, acting as a suffocant, insect growth regulator, and antifeedant, all in one product.

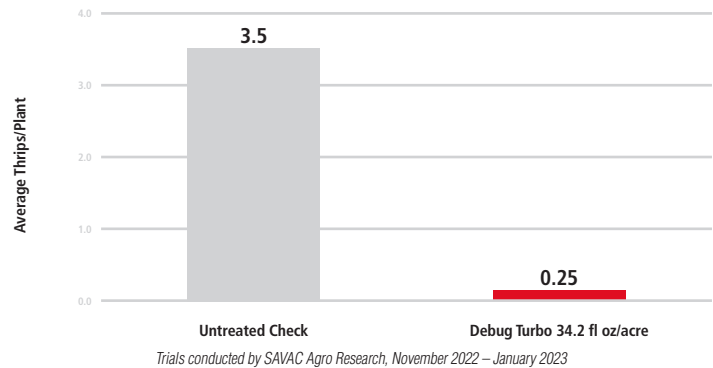
DeBug Turbo Data - Head Lettuce

Trials were conducted on head lettuce, *Lactuca sativa* var. *capitata* in Guanajuato, Mexico. The target pest was Western flower thrips, *Frankliniella occidentalis*. The spray rate was 34.2 fl oz/acre with a dilution of 20-40 gal/acre. During the trial, a total of five applications were made with 6-7 days between each application. Treatments were initiated in the early colonization of *F. occidentalis* populations.

Key Takeaways

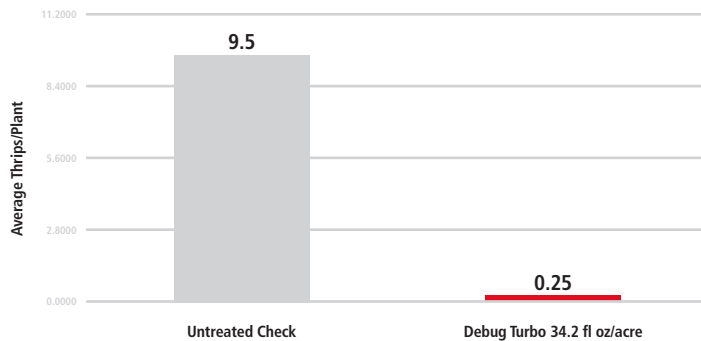
Data shown here represents greater than 95% control of adult Western flower thrips, on head lettuce, after five applications of DeBug Turbo. Commercially acceptable control, greater than 80%, was achieved after the third application.

Control of Adult Western Flower Thrips with DeBug Turbo on Head Lettuce

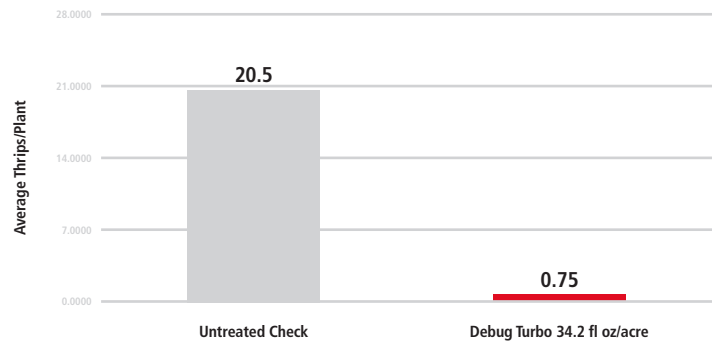


DeBug Turbo Data - Avocado

Control of Adult Avocado Thrips with DeBug Turbo on Avocado



Control of Nymph Avocado Thrips with DeBug Turbo on Avocado



Trials were conducted on Avocado, *Persea americana* var. *Haas*, in Sonora, Mexico. The target pest was Avocado thrips, *Scirtothrips perseae*. The spray rate was 34.2 fl oz/acre with a dilution of 100 gal/acre. During the trial, a total of five applications were made with 6-7 days between each application. Treatments were initiated in the early colonization of *S. perseae* populations.

Key Takeaways

Data shown here represents greater than 95% control of adult and nymph Avocado thrips, on Avocado, after five applications of DeBug Turbo. Commercially acceptable control, greater than 80%, was achieved after the third application.