

SEEDCORN MAGGOT CONTROL IN ONION

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Seedcorn maggot, *Delia platura*, can significantly reduce field stand establishment in several crops in the Columbia Basin including dry bulb onion. Trials were established in 2013 and 2015 in commercial fields to determine which insecticide treatments provided adequate control of seedcorn maggot in dry bulb onion. Previous studies showed good efficacy with Lorsban (chlorpyrifos) and FI500 (thiamethoxam+spinosad)(maxim+dynasty+apron), but we wanted to evaluate other insecticides that producers had been using. Plant stand counts were used as the measure to determine efficacy.

A trial in Boardman, OR (Fig. 1) showed that the standard Lorsban was still effective, and that the FI500 treatment was equally effective at control of seedcorn maggot. Coragen and Warrior applied post planting were ineffective, providing further evidence that seed treatments and at plant insecticide were still the best options for control.

Another trial conducted in 2013 in an onion field near Plymouth, WA was designed to compare FI500 to F300 (maxim+dynasty+apron), and Sepresto (clothianidin+imidacloprid)(thiram+allegiance+coronet) (Fig. 2). At this trial site, pest pressure was low, and there were no significant differences in treatments at the first evaluation interval. At the second evaluation, the plant stands were lower in the Sepresto treated plots. Since there were no differences between FI500 and F300, it is likely that the stand loss was from soil fungal pathogens rather than seedcorn maggot.

During 2015, further experiments were established to determine if Sepresto and FI500 were equal in their ability to control seedcorn maggot. At the trial site in a commercial field near Patterson, WA, there was relatively low pest pressure and no difference in treatments during the first stand evaluation (Fig. 3). At the second evaluation at that site, stands were numerically improved with seed treatments, but there was not significant improvement except with the grower treatment of FI500.

A second experiment in 2015 had much higher pest pressure, and as such all treatments (FI500, Sepresto, and Lorsban) improved stands over the untreated check (Fig. 4).

After several years of evaluation, it seems that the seed treatments Sepresto, and FI500 provide control of seedcorn maggot that is equivalent to the standard Lorsban in commercial onion production in the Columbia Basin. Seed treatments are an added expense, but with a high value crop such as onion, stand loss cannot be tolerated.

Boardman SCM 2013

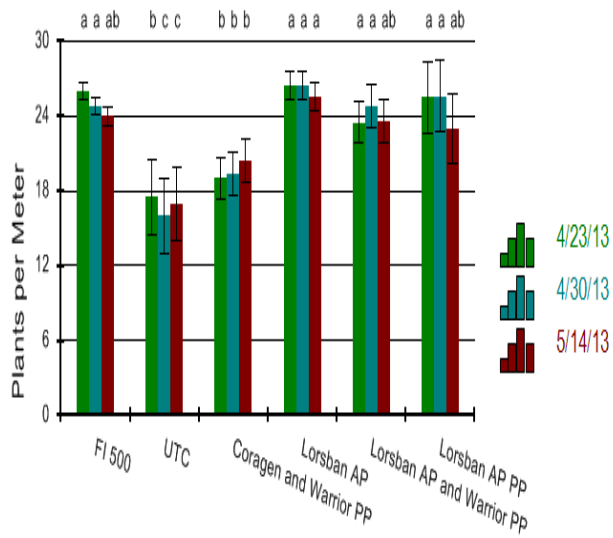


Figure 1. Plant stand vs. treatment at various sampling dates. Treatments with different letters are significantly different from one another.

Plymouth Onion Trial 2013

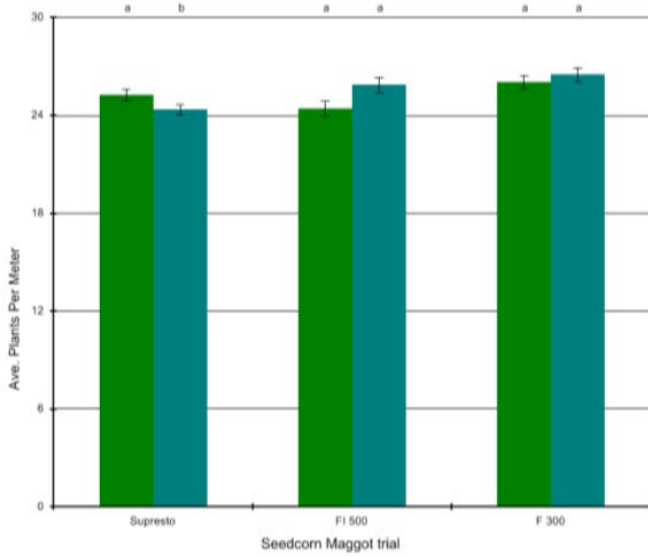


Figure 2. Plant stand vs. treatment at various sampling dates. Treatments with different letters are significantly different from one another.

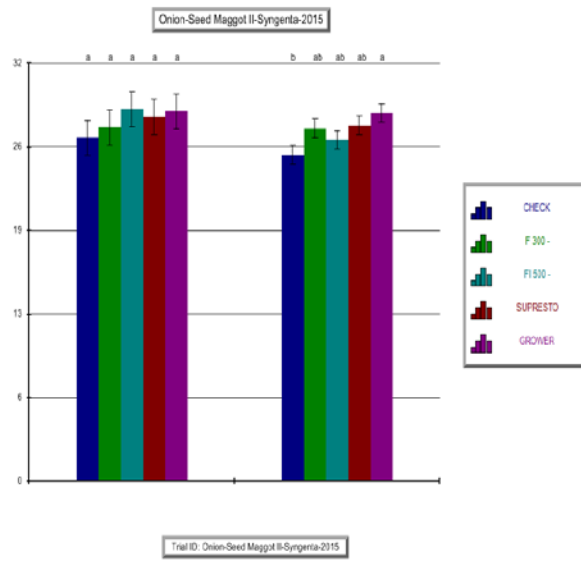


Figure 3. Plant stand vs. treatment at various sampling dates. Treatments with different letters are significantly different from one another

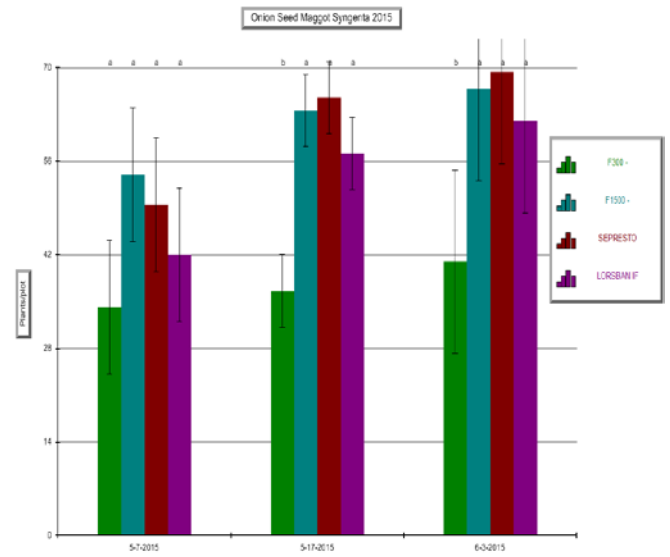


Figure 4. Plant stand vs. treatment at various sampling dates. Treatments with different letters are significantly different from one another