

## 2017 Executive Summary

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The tomato variety CC337 was used in all trials.

### **Trial 1 – Weed Control and tolerance of processing tomatoes to pethoxamid.**

Pethoxamid a new herbicide and has a group 15 mode of action. Therefore, it's spectrum of weed control and mechanism will be similar to Dual II Magnum. This trial tested this herbicide at application timings of PPI, PRE transplant, and POST (14 days after transplant). Two does were tested, a proposed label rate and a 2x or overlap rate. Tolerance of processing tomatoes was excellent to pethoxamid. At 14 days after application (DAA) there was some minor injury <10% when applied POST; however, this injury was transient and was not visible when rated at 28 DAA. The most prominent weeds in the trial were common lambsquarters, and large crabgrass. Pethoxamid provided the best weed control when applied PPI or PRE. When pethoxamid was applied POST there was poor control of common lambsquarters (<55%). This reduction in weed control did not cause any statistical reductions in tomato yield.

### **Trial 2 – Weed control and tolerance of processing tomatoes to POST tank-mixes with pethoxamid.**

In this trial pethoxamid was tank-mixed with Sandea, Prism, Pinnacle, Poast Ultra, Venture L or Sencor POST at the 6-8 leaf stage of the tomato. There was some marginal injury observed in some of the treatments that appeared to persist through to the 28DAT, but never exceeded 20%. Based on the symptomology this injury was more related to injury from a Dual II Magnum/Sencor PPI cover spray than the treatments themselves. The most common weed species in this trial were large crabgrass, common lambsquarters, and stinkgrass. Control of all species was excellent (>90%) for all weed species across all treatments. Marketable yields did not differ among treatments.

### **Trial 3 – Weed control and tolerance of processing tomato to POST tank-mixes with Sandea**

In this trial Sandea was tank-mixed with Sencor, Prism, or Pinnacle and applied POST on the tomatoes at the 6-8 lf stage. There were no injury concerns for any of the treatments tested. The most common weeds in this trial were common lambsquarters, large crabgrass and stinkgrass. Control of these grasses was excellent for any treatments that contained Prism, otherwise the tank-mixes were more focused for broadleaved control. Because of the poor grass control yields were reduced in treatments that contained Pinnacle, or Sencor.

### **Trial 4. - Weed control and tolerance of processing tomato to POST tankmixes with Dual II Magnum.**

In this trial Dual II Magnum + Sencor was tank-mixed with Pinnacle, Prism, or Sandea POST at the 6-8 leaf stage of the tomato followed by another application of Dual II Magnum + Sencor at the flowering stage. There were no injury concerns in this trial resulting from any of the treatments that were applied. The most common weed species in this trial were common lambsquarters, large crabgrass, and stinkgrass. Control of all species was excellent for all species across all treatments; however, large crabgrass control did decrease to 70% by 56 DAT for the Sandea and Pinnacle treatments. Yields did not differ from the Weed-free control for any of the treatments tested.