

Post-plant Solarization or Pre-plant Soil Fumigation for Control of Verticillium Wilt in Young West Side Orchards



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Problem:

- Thousands of acres of almond orchards are being planted on the Westside of the San Joaquin Valley into ground with a long history of row crops, including tomatoes and melons. As a result, these new orchards are often afflicted with Verticillium wilt disease, a pathogen that survives in the soil for many years. This project tests preplant fumigation or post-plant solarization with black polyethylene film to determine if severity of Verticillium wilt disease is reduced or if any growth response is observed. Telone II is commonly used prior to planting orchards but is not regarded as effective against *Verticillium dahlia*. Chloropicrin can be effective but is under increased regulatory scrutiny. Dominus (allyl isothiocyanate) is a new biofumigant that is reportedly effective against Verticillium wilt in strawberries.

Treatments:

- Telone II @ 340 lb
- C 100 (200 lb)
- Dominus (340 lb)
- Untreated + tarp
- Telone II + tarp
- C 100 (200 lb)
- Dominus + tarp
- Post plant solarization (black poly film at planting time)



Description:

- “Shasta” self-fertile almond on Cornerstone P/A hybrid rootstock
- Soil is Capay Clay
- Long history of tomatoes and melons.
- Fumigated September, 2016.
- Trees planted November 2016
- Polyethylene film applied March 8, 2017
- Will record disease severity, tree performance and yield response

