



## FireWall and FireLine Deliver Effective Solutions Against Citrus Canker on Oranges

### Technical Bulletin – No. 13

Results from multiple, large-scale, replicated field trials across Florida on ‘Hamlin’ and ‘Valencia’ oranges with FireWall 50 and FireLine 17 have demonstrated –

- **FireWall™ 50 WP and FireLine™ 17 WP each are effective against the citrus canker bacterium *Xanthomonas citri* pv. *citri***
- **FireWall™ 50 WP and FireLine™ 17 WP each significantly reduce fruit drop associated with citrus canker**

In these trials conducted in the fall of 2014, FireWall 50 WP (FW50) was applied as single and two-application treatments on both ‘Hamlin’ and ‘Valencia’ round oranges while FireLine 17 (FL17) was applied as a single application to ‘Hamlin’ oranges (see table below).

FireWall 50 WP (FW50) & FireLine 17 WP (FL17) Citrus Canker Trials				
Treatment	Pct. Fruit Dropped vs. Untreated, ‘Hamlin’	Pct. Fruit Dropped vs. Untreated, ‘Valencia’	Fruit Saved, ‘Hamlin’ (Boxes/Ac)*	Fruit Saved, ‘Valencia’ (Boxes/Ac)
FW50 – 1 app.	-21.1	-32.8	15.5	18.1
FW50 – 2 apps.	-22.2	-26.9	18.1	14.9
FL17 – 1 app.†	-21.7	---‡	6.4	---‡

†Mini-trial consisting of 10 trees only  
‡ treatment not applied

\*assuming 150 trees per acre and 300 fruit per box.

Results from these trials revealed a significant reduction ( $p = 0.05$ ) in fruit drop associated with citrus canker in response to treatment with FireWall 50 and FireLine 17; percent of fruit dropped from trees was reduced by more than 20% compared to the Untreated Control for both ‘Hamlin’ and ‘Valencia’ oranges. This reduction in fruit drop (saved fruit) resulting from treatment with FireWall 50 and FireLine 17 foliar applications translates into an added economic value of up to 18 boxes per acre.