

## Root inhibitor herbicide injury in tomatoes

Root inhibitor herbicides such as Trifluralin (Treflan HFP) and Pendimethalin (ProwlH<sub>2</sub>O) are soil applied and preplant- incorporated and used for control of many annual grasses and broadleaves in processing tomatoes in the Central Valley.

This year, I have seen symptoms from these root inhibiting herbicide injury in a processing tomato field and the damage was quite uniform and widespread in the field. The affected plants had a very atypical swelling at the soil line, were wilting and collapsing (Pic 1, 2 and 3). The stems were very brittle and easily snapped at the soil line near the swollen stems (Pic 4), which is a characteristic of Pendimethalin injury. There was some lodging in the field probably due to winds or a rainy event (Pic 3).

It is hard to predict why this happened as the herbicides are supposed to be incorporated into the top 2-3 inches of soil where the weeds germinate, and the transplants are plugged deeper. One of the hypotheses could be that there were some heavy rains that could have moved the herbicides deeper into the soil profile. **Another possibility is that residual trifluranlin or pendimethalin from the previous crop along with current application may have caused soil herbicide levels to be beyond crop tolerance.**

Similar damage was observed in the Sacramento valley in 2021 where a young tomato field was affected significantly with root inhibiting herbicide injury. These are typical injury symptoms for these herbicides and can be seen on other veg crops such as melons, peppers etc.

Please contact your local Vegetable crops Advisor if you see similar symptoms in the field.



Pic 1 Swollen stems at the soil line



Pic 2 Wilted plants in the field.



Pic 3 A collapsed and dead plant in the field.



Pic 4 A stem broken off at the soil line.

## Resources

<https://ucanr.edu/blogs/blogcore/postdetail.cfm?postnum=50693>

NC State Extension, Herbicide Injury Factsheets, Root Inhibitors: <https://content.ces.ncsu.edu/root-inhibitors>

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