

## ***TECH TIP: Herbicide Damage***



Now that we've experienced some hot weather across North America and it's only getting hotter, you might start seeing strange symptoms appearing on different crops—particularly if you grow and sell in urban or suburban areas. When you think about it, it's no real surprise that hot weather in summertime frequently leads to incidences of herbicide damage on non-target crops.

A combination of temperature inversions, less-than-ideal application conditions (mainly high temps that greatly increase the risk of volatilization) and oppressive heat that unfortunately leads to poor decisions on the part of applicators, a lot of things can happen that lead to herbicide drift blowing into your greenhouse or onto outdoor-grown crops. So, what to do if you happen to fall victim to accidental herbicide damage?

*Herbicide damage can be difficult to diagnose, so here are a few things to keep in mind if your crops suddenly look a little bit off and you think herbicide damage may be the culprit:*

1. Look for foliar bleaching and/or aggressive leaf curling. Foliar bleaching coupled with distortion are two typical symptoms that go hand-in-hand when glyphosate (Round-Up and other off-brand herbicides) is the cause. Leaf curling or cupping and aggressive marginal distortion without the foliar bleaching effect is a good indicator that 2,4-D or dicamba are the causal agent. Other herbicides can cause damage to crops, but these three are the ones that I see most often.
2. Distinct directional patterns of symptoms are generally a good indicator that herbicides are involved. For example, if symptoms are worst by your side vents and gradually get better as you scout further away from the vents, this is a good indicator that herbicide drifted in from the windward side of your range.

3. Tomatoes are a great indicator crop for herbicide damage. They are highly sensitive to different herbicides compared to other crops that you might have on the bench, so keeping a close eye on your tomatoes could help you catch herbicide symptoms damage early or identify where the drift came from and address it before a repeat offense can occur.
4. Have good relationships with your neighbors! No one WANTS to cause unintentional damage to your plants, so if you have concerns regarding use of herbicides near your production and/or retail areas, have that conversation before accidental damage can occur (in a civilized manner, of course). This often makes your neighbor more acutely aware of the potential risks to your livelihood and oftentimes, if the worst should come to pass and your crops get burned, results in a more amicable solution when they are confronted with a drift issue that they caused.
5. If you want to have any chance of getting a positive test result for herbicide residue on your plants, collecting and submitting samples ASAP is critical. Most herbicide active ingredients are used-up or metabolized quickly, so most plants will test negative for residue by the time you can visually see symptoms. If you see a spraying crew applying herbicides irresponsibly and can smell what they are spraying while standing in your greenhouse, you might want to bag and overnight samples to a lab. Otherwise, getting a positive test for herbicide residue is VERY difficult and often quite costly.
6. If you suspect your crops have been damaged by herbicide drift, contact your local department of agriculture or local extension office. Both agencies have lots of experience handling these types of situations and will be able to inform you on what kinds of action can be taken.