

## TECH TIP: SMOKE DAMAGED CROPS—FROM FIRE

***If a fire ever occurs in your greenhouse, human safety comes first and hopefully no one is injured. But crops are also important, and actions can be taken to keep them healthy and viable. If the fire is short-lived, and other damage like significant amounts of ash or even freezing if the incident happens in winter, are avoided, here are some tips to help keep crops healthy.***

Assuming the growing area was successfully vented, there's not much need for rinsing unless there's noticeable residue on the foliage and leaching the growing media is most likely not necessary. If damage is going to occur, it will most likely be on above-ground plant parts from exposure to volatile compounds in the air during the burn, but the exposure has already passed, and harmful gasses have been flushed out. Damage will be minimal with any luck, but you can expect to at least see some burn along the leaf margins show up in the days following a fire—especially on younger/tender growth. Also, you may see leaf twisting or yellowing/leaf senescence on ethylene-sensitive crops, but maybe not. It's hard to know exactly what was in the smoke.

**For crops that DO have ash/residue on the foliage, it's suggested you clean it off:**

- Start with a clear water rinse using a hydraulic sprayer (dial it back to about 150–200 psi) or a fan-pattern volume-reduction hose nozzle. The goal here is to rinse in a couple of passes using low to moderate pressure and relatively small droplets. This will get them cleaned off but prevent soaking of the growing media.
- For stubborn residue or crops that have scabrous, fuzzy or sticky trichome-covered leaves, use of a wetting agent like Capsil may be helpful to loosen it up. If you need to do this, come back and do a final pass with clear water (without wetting agent) pretty quickly thereafter. If anything in the ash/residue is phytotoxic, clean it off ASAP. Do your best to not loosen and spread it out over the leaf surface, making it easier to absorb.

If phytotoxicity occurs from exposure to materials during the burn, damaged tissue will provide an entry point for pathogens. A suggestion would be to apply a broad-spectrum fungicide on affected crops first thing the following morning. Also, while plants may not have frozen, pay special attention to chilling-sensitive crops that may have gotten cold while the greenhouse was temporarily uncovered.