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Phytotoxicity on Geraniums

Given that we've seen a few samples of geranium with phytotoxicity due to Kontos (a.i. spirotetramat) applications, it seems like a good time for a reminder that Kontos should not be used on geranium *and* a reminder to carefully read all pesticides labels before use.

We've seen injury to zonal and ivy geraniums and their various hybrids. The Kontos label cautions against all *Pelargonium* species.

From the cases we've seen this year as well as the cases we've seen in the past, injury can be the result of direct application to plants via spray or drench applications. In addition, there have been cases of injury from treated hanging baskets dripping onto sensitive geranium crops below. It is important to realize that injury can also occur as a result of runoff or leaching from baskets hanging above a crop.



Bleaching and leaf curl symptoms of phytotoxicity on geranium.

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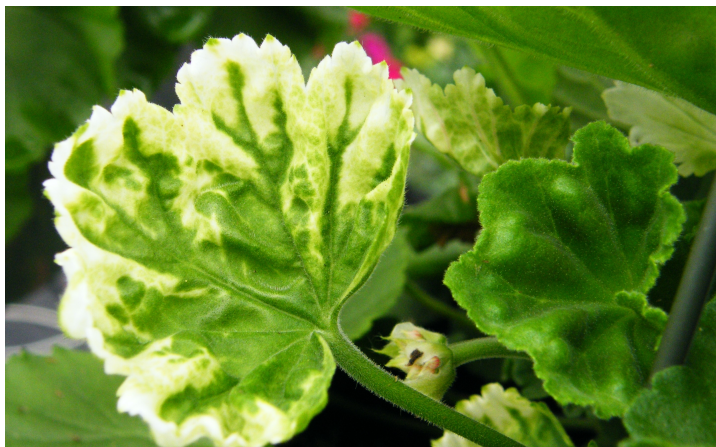


Symptoms seen on geraniums include a striking chlorosis or bleaching and leaf distortion, crinkling, or cupping. If the injury is not severe, the plants can eventually grow out of the injury. Whether or not the plant will be marketable will depend on the severity of the injury and the timing of application and injury.

You should use caution with Kontos on some other plants as well. In addition to the label precaution against applications to geraniums (*Pelargonium* spp.), it is also not recommended for use on orchids, hoya, *Dracaena*, *Cordyline*, *Schefflera*, neanthebella palm, and ferns. The label also recommends to not make more than one application per season on *Hydrangea*, *Impatiens* spp. crotons (*Codiaeum* spp.), *Fuchsia* hybrids, *Petunia*, *Peperomia*, stock, or cyclamens (*Cyclamen* spp.).

In research trials through the IR-4 Program (<https://www.ir4project.org/ehc/>), slight height reduction, leaf curling, bleaching of flowers, or plant death were observed in *Begonia* sp., *Coleus x hybridus*, *Petunia* sp., *Pelargonium* sp., *Vinca* sp., and *Viola* sp.) at the 2X and 4X rates applied as drench (significant injury was not observed at labeled rates). *Verbena x hybrida* exhibited flower discoloration at all rates applied as drench in one trial. (You can read the full report here: <http://ir4.rutgers.edu/Ornamental/SummaryReports/SpirotetramatCropSafety2014.pdf>.)

As always, you should carefully read all pesticide labels for any precautions regarding plant safety as well as for other restrictions and recommendations. In addition, when using new products (or product combinations or tank mixes) test the labeled rates on a small number of plants for phytotoxicity prior to widespread use.





Geranium showing leaf chlorosis, leaf bleaching, and leaf distortion. Plants were sprayed with Kontos.



Same sample, 4 weeks later. While the distortion is still evident, chlorosis and bleaching has faded and new growth is healthy.

e-GRO Alert

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