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## Abstract

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Damage to trees from chemicals applied for control of pests, weeds, and diseases is a relatively common problem. Sources of chemical injury include incompatible or incompletely mixed ingredients, spray drift from herbicides, and residues from previous sprayings in the spray tank or discharge hose. Other less frequently recognized sources are the leaching of soil-applied herbicides and the application of herbicides within the root zones of trees. Perhaps the most common tree injury results from herbicide drift. Phenoxy types, such as 2,4-D, can cause considerable foliage distortion on some trees a long distance downwind from a spray area. Careless mixing of two or more pesticides or using an old pesticide that has frozen and separated can result in tree injuries. Most, if not all, of these damages are the result of "carriers," such as xylene and other petroleum distillates. When improperly dispersed on plant foliage, these materials will concentrate and damage the natural wax protection (cuticle) of a leaf. Sometimes spray burn resembles drought stress. This is particularly true when the spray is applied on a hot day. Many herbicides are applied to the soil, where they act upon the roots of weeds. Dicamba (Banvel) is a common chemical that acts in this way. Unfortunately, dicamba also acts on roots of trees and shrubs. It has a relatively long life and is subject to leaching. Soil sterilants have no useful place in any landscape, residential or commercial. Soil sterilants are intended only for industrial locations. Soil sterilants sterilize the soil. They kill not only trees, but most other forms of life in the soil as well, rendering the soil unfit for plant growth.