



Arkansas Plant Health Clinic Newsletter

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Herbicide Damage

We are getting plant samples from lawns, greenhouses, and cold frames with herbicide damage. Many growers do not realize how sensitive growing plants are to herbicides. Some herbicides such as glyphosate (Roundup) can drift over long distances to affect tender plants. Roundup, however, does not have any soil activity. Note that in tomato, Roundup causes bleaching at the base of leaflets. This sign of Roundup damage also occurs in dogwood. In wheat, Roundup causes shortened flags, severe leaf twisting, stuck in the boot, and bleached interveinal areas. Other classes of herbicides such as the phenoxy herbicides (2-4-D), also kill by direct contact, but have a long residual in soil. Severely affected plants will not grow, flower, or fruit properly even if they survive the initial exposure. Symptoms are leaf curling, twisting, chlorosis, strapping, and stunting.

Green Bean Phenoxy Injury- Abiotic



Photo by Sherrie Smith, University of Arkansas
Cooperative Extension

Impatiens Phenoxy Injury-Abiotic



Photo by Sherrie Smith, University of Arkansas
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Coleus Phenoxy Injury-Abiotic



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Dogwood Glyphosate Injury-Abiotic



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Tomato Glyphosate Injury-Abiotic



Photo by Bobby Hall, University of Arkansas Cooperative Extension

Rose Glyphosate Injury-Abiotic



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

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Apple

A common genetic disorder of apple is known as Burrknot. It causes differentiated root tissue to grow above the soil line. Rough, raised gall-like structures appear on the trunk and/or branches usually at the nodes. These galls superficially resemble Crown gall but are not caused by a disease organism. High temperatures, low light, and high humidity can stimulate development of these above ground root initials. A few of these growths cause little problems, but severe Burrknot can cause trees to become stunted, girdled, or weakened at the site of the Burrknot. The galls are also a magnet for borer attacks. Some rootstocks are more susceptible to Burrknot than others. Burrknot is common on M7, M9, M26, MM111, and Mark rootstocks. Scion cultivars such as Gala, Empire, and Springdale are also susceptible. The optimal solution is to plant rootstocks that are not genetically disposed to Burrknot formation. The knots can be removed by surgically cutting them out, or sometimes by painting them with Gallex.

Apple Burrknot-Abiotic



Photo by Allen Bates University of Arkansas Cooperative Extension

This bulletin from the Cooperative Extension Plant Health Clinic (Plant Disease Clinic) is an electronic update about diseases and other problems observed in our lab each month. Input from everybody interested in plants is welcome and appreciated.

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