



## Arkansas Plant Health Clinic Newsletter

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### Willow

Willows like moist soil and can tolerate a lot of water. However, on soils that stay wet for extended periods of time, oxygen content in the soils becomes limited and feeder roots start to die. The tree tries to compensate by forming clumps of adventitious roots above the soil line. Allow the soil to dry between watering. The strange looking clusters of root initials on the trunk may or may not disappear when conditions improve.

### Willow Adventitious Roots-Abiotic



Photo by Mark Keaton, University of Arkansas  
Cooperative Extension

### Willow Adventitious Roots-Abiotic



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## Tomato

Every year the Plant Health Clinic receives samples suffering from herbicide damage. Vegetables, fruits, and ornamentals are all quite sensitive to both phenoxy based herbicides such as 2-4-d, and to glyphosate damage (Roundup). Roundup is not your friend in the garden. It will drift up to 1500 ft across the yard when there is a breeze. Symptoms of roundup damage to tomato are bleached white to yellow areas at the base of leaflets. Strap-like leaves, witches' brooms, and leaf curling are some of the symptoms on other species. Roundup is systemic, so perennial plants not killed outright will have damage symptoms again the following season. Large doses of the herbicide will of course kill the plant. Phenoxy based herbicides such as 2-4-d and Grazon causes extreme twisting, distortion, and leaf curl.

### Tomate by Keiddy Urrea

Cada año por esta época la clínica de plantas de la Universidad de Arkansas recibe muestras con síntomas de daño causado por herbicidas. Plantas ornamentales, frutales, y vegetales son muy susceptibles a los herbicidas que contienen grupos fenoxi como el 2,4-D y herbicidas que contienen glifosato (Roundup). El Roundup es un herbicida sistémico que dependiendo de las condiciones en que se aplique puede dispersarse con el viento hasta 1500 pies a lo largo del jardín. Un síntoma del daño causado por Roundup en tomates es el amarillamiento en la base de las hojas. En otras especies, se presentan síntomas como: necrosis en el borde de la hoja, torcedura y

succión hacia arriba o debajo de las hojas, y malformación de las hojas y frutos. En plantas perennes, los síntomas comúnmente se volverán a presentar al siguiente año de haber sido expuestas a este herbicida. Además, es importante resaltar que largas dosis de este herbicida pueden matar a las plantas. Por otra parte, los herbicidas que contienen el grupo fenoxi, como el 2,4- D, causan síntomas como: enrollamiento, deformación y torcedura de las hojas.

### Tomato Phenoxy Herbicide Damage-Abiotic



Photo by Sherrie Smith, University of Arkansas Cooperative Extension



## **Tomato Phenoxy Herbicide Damage-Abiotic**



Photo by David Freeze, University of Arkansas  
Cooperative Extension

## **Green Bean Phenoxy Herbicide Damage-Abiotic**



Photo by Sherrie Smith, University of Arkansas  
Cooperative Extension

## **Tomato Phenoxy Herbicide Damage-Abiotic**



Photo by Robert Goodson, University of Arkansas  
Cooperative Extension

## **Tomato Roundup Damage-Abiotic**



Photo by Sherrie Smith, University of Arkansas  
Cooperative Extension



### **Tomato Roundup Damage-Abiotic**



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

### **Blackberry Roundup Damage-Abiotic**



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

### **Collards Phenoxy Damage-Abiotic**



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

### **Coleus Phenoxy Damage-Abiotic**



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

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### **Rose Roundup Damage-Abiotic**



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

### **Peony Roundup Damage-Abiotic**



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

### **Rose Roundup Damage-Abiotic**



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

### **Squash Phenoxy Damage-Abiotic**



Photo by Olivia Foster, University of Arkansas Cooperative Extension

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**Sherrie Smith**  
**Keiddy Urrea**



**Issue 15, June 4, 2018**

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.

"This work is supported by the Crop Protection and Pest Management Program [grant no. 2017-70006-27279/project accession no. 1013890] from the USDA National Institute of Food and Agriculture."