DIVISION OF AGRICULTURE
RESEARCH & EXTENSION
University of Arkansas System

Sherrie Smith

SPDN
Southern Plant Diagnostic Network

Department of Plant Pathology

PLANT HEALTH CLINIC NEWS

Issue 2-March 15, 2014

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.

Winter injury-shrubs

We are seeing winter damage on many shrubs, particularly from the southern part of the state where they experienced near record lows. We are seeing damage to euonymus, loropetalum, camellia, gardenia, azalea, lamb's ears, and fruit such as strawberries. Hydrangeas that bloom on old wood were hit hard, with many if not most buds ruined. In many cases, the damaged foliage will resemble lettuce leaves that have been frozen, then defrosted. For damaged shrubs, wait until the danger of late frost is over, then prune off the damage. Fertilize per soil test.

Euonymus winter damage

Sherrie Smith University of Arkansas Cooperative Extension

Hydrangea winter damage

http://www.coldclimategardening.com/wp-

Loropetalum winter damage

Sherrie Smith University of Arkansas Cooperative Extension

DIVISION OF AGRICULTURE
RESEARCH & EXTENSION
University of Arkansas System

Sherrie Smith

SPDN
Southern Plant Diagnostic Network

Department of Plant Pathology

PLANT HEALTH CLINIC NEWS

Lamb's ears winter damage

Sherrie Smith University of Arkansas Cooperative Extension

Winter injury-turf

With near record low temperatures in many parts of the state, we are expecting some winter injury to turf. Many factors contribute to winter damage to lawns and golf greens. Early winter damage is happens when turf is subjected to a sudden severe freeze while still succulent and green. In such cases, 50% or more stand losses may occur between 18 and 23°F. Winter injury can also occur in the spring as grass is greening up, if a severe cold snap occurs. This happens because early spring sugars and carbohydrates have not been completely converted into more cold-tolerant starches. Freezes are also associated with dry windy conditions that desiccate the crowns, causing them to be more liable to injury. Alternatively, rain accompanying cold fronts causes freezing of the crowns which causes them to be easily crushed by foot traffic. In summary, the factors most often associated with extensive winter kill are: excessive traffic; standing water; drought; potassium deficiency; excessive thatch; excessive fall nitrogen fertilization; excessive windy conditions; close mowing; shade; pest or pesticide damage; and turf cultivar. A winterizer type fertilizer is important in the fall. Potassium levels should indicate medium to high levels with leaf tissue analysis indicating at least 1.5% potassium. Excessive thatch levels causes turf to root above the soil in the thatch layer, making the turf more susceptible to winter injury. De-thatch during the growing season if thatch is greater than ½". Avoid excessive fall nitrogen fertilization as this promotes succulent growth that is more easily injured. Close mowing and shade both reduces carbohydrate levels and contributes to winter kill. Disease and insects weaken the grass, making it more susceptible to freeze injury. The multitude of factors that can cause winter injury may mean that one homeowner has a beautiful stand of turf while the neighbor next door has 90% winter kill. Growing cold tolerant cultivars lessens the incidence and severity of winter injury. Vamont, Midiron, TifSport and Quickstand bermudagrasses are cultivars which have increased cold tolerance. Some of the zoysiagrass cultivars that have been found to have more cold tolerance are Korean Common, Zenith, Meyer, Belair, and El Toro.

Turf winter kill

Sherrie Smith University of Arkansas Cooperative Extension

DIVISION OF AGRICULTURE
RESEARCH & EXTENSION
University of Arkansas System

Sherrie Smith

SPDN
Southern Plant Diagnostic Network

Department of Plant Pathology

PLANT HEALTH CLINIC NEWS

Winter injury-tomato

It is too early to have tomatoes and peppers out, but some eager gardeners tried to rush the season and now have either dead or damaged plants. Soil temperatures must be above 50°F for the plants to grow. Do not put them out before the last average frost date for your area. Frost dates are average dates, not absolutes. They can vary year to year, and are meant for guidelines.

Typical Last Average Spring Frost Dates in Arkansas

Alicia	**4/10**
Alum Fork	**4/9**
Arkadelphia	**4//10**
Arkansas Post	**3/30**
Batesville Livestock	**4/14**
Batesville L&D	**4/17**
Beedeville	**4/7**
Benton	**4/11**
Bentonville	**4/27**
Blakely Mountain Dam	**4/19**
Blue Mountain Dam	**4/12**
Blytheville	**4/4**
Brinkley	**4/3**
Cabot	**4/15**
Calico Rock	**5/1**
Camden	**4/5**
Clarendon	**4/2**
Conway	**4/10**
Corning	**4/14**
Crossett	**4/11**
Dardanelle	**4/14**
Dequeen	**4/11**
Dermott	**4/6**
Des Arc	**4/3**
Dumas	**4/3**
El Dorado	**4/6**
Eudora	**3/29**
Eureka Springs	**4/17**
Evening Shade	**4/28**
Fayetteville	**4/23**
Fordyce	**4/9**
Fort Smith	**4/14**
Gilbert	**4/30**
Gravette	**4/27**
Greenbriar	**4/19**
Greer's Ferry	**4/16**
Harrison	**4/14**
Helena	**4/4**
Hope	**4/7**
Hot Springs	**4/6**
Jonesboro	**4/10**
Keiser	**4/12**
Keo	**4/2**
Lead Hill	**4/30**
Leola	**4/14**
Little Rock	**4/4**
Magnolia	**4/7**
Malvern	**4/13**
Mammoth Spring	**4/28**
Marianna	**4/6**
Marshall	**4/18**
Mena	**4/15**
Monticello	**4/11**
Morrilton	**4/11**
Mount Ida	**4/26**
Mountain Home	**4/16**
Mountain View	**4/21**
Murfreesboro	**4/10**
Nashville	**4/10**
Newport	**4/3**
Nimrod Dam	**4/12**
Pine Bluff	**4/3**
Pocahontas	**4/14**
Portland	**4/2**
Prescott	**4/4**
Rohwer	**4/2**
Saint Charles	**4/2**
Searcy	**4/12**
Sparkman	**4/8**
Stuttgart	**4/1**
Subiaco	**4/10**
Texarkana	**3/28**
Waldron	**4/20**
Warren	**4/4**
West Memphis	**4/9**
Wynne	**4/9**

DIVISION OF AGRICULTURE
RESEARCH & EXTENSION
University of Arkansas System

Sherrie Smith

SPDN
Southern Plant Diagnostic Network

Department of Plant Pathology

PLANT HEALTH CLINIC NEWS

Request for help from Dr. Robbins:

Root knot nematode populations are needed for our Arkansas species study. I am a nematologist in the department of Plant Pathology in Fayetteville. My student and I are trying to amass populations of as many species of Root knot nematode (Meloidogyne sp.) as possible for species identification using molecular techniques. At present no root knot species in Arkansas have been identified using molecular technology. We are interested in receiving populations from home gardens, shrubs, flowers, trees and grasses. For samples we need about a pint of soil and feeder roots in a sealed plastic bag that is plainly identified by plant host, location (City County, physical address, collector and date of collection). Please send samples to us at the follow address:

Dr. Robert Robbins
Cralley-Warren Research Center
2601 N. Young Ave
Fayetteville, AR 72701
Phone 479-575-2555
Fax 479-575-3348
Email: rrobbin@uark.edu