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CLINIC NEWS

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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.

Beans

Bacterial Brown Spot of bean, caused by the bacterium *Pseudomonas syringae* pv. *syringae*, can cause considerable damage to both snap and dry beans. Leaf lesions begin as small, circular, brown spots that may be surrounded by a yellow hallow. Lesions may eventually coalesce into large areas where the centers fall out, giving a tattered appearance. Pod lesions begin as water-soaked circular spots that become brown and necrotic. The lesions may cause the pod to become distorted. *Pseudomonas syringae* is spread by rain or overhead irrigation, and survives on weeds and crop residues. Bacterial diseases are difficult to manage. Copper fungicides may be applied during the late vegetative to early flowering stage. Pathogen free seeds and the use of resistant cultivars are the best options.

Bean Bacterial Brown Spot-
Pseudomonas syringae pv. *syringae*



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Redbud

Redbuds are one of our favorite spring blooming native trees. They are valued mostly for their lovely pink bloom and convenient size. Redbuds grow 20-30 feet tall with a 25-35 foot spread. They are easily grown in average, medium moisture, well-drained soils in full sun to part shade. Part shade is best in hot summer climates. They are not picky, but perform best in moderately fertile soils with regular and consistent moisture. Avoid wet or poorly drained soils. Redbuds do not transplant well, so avoid moving after planting. A major and devastating disease of Redbuds is Verticillium Wilt, caused by *Verticillium albo-atrum* or *Verticillium dahliae*. Symptoms may appear any time during the growing season. Some sections of the tree may show signs of Verticillium Wilt while other sections look normal. Symptoms may appear chronically over a number of seasons or cause a sudden and total collapse of the plant. Symptoms include small, yellow foliage, leaf scorch, slow growth, abnormally heavy crops of seeds, leaf curling, drying, abnormal red or yellow color of foliage, or areas between leaf veins, partial defoliation, wilting and branch dieback. Brown to black streaking of the sapwood is commonly found when examining branches in cross section. The streaking may be scattered throughout a branch or cross-section, or may be a new infection and confined to new sapwood. There is no cure for Verticillium Wilt. Redbuds are only one of over 300 susceptible species. Maples, Box elder, Tree of Heaven, Sumac, Pecan, Catalpa, Camphor tree, Yellow wood, Persimmon, Russian Olive, Weeping fig, Indian laurel, Ash, Golden Rain tree, Tulip tree, Southern Magnolia, Black Gum, Olive, Avocado, Chinese Pistachio, Pistachio, Almond, Apricot, Cherry, Peach, Plum, Prune, Black Locust, Elm, Barberry, Indian Hawthorne, Yeddo Hawthorn, Gooseberry, Rose, Rosemary, Blackberry, Raspberry, Elderberry, Lilac, Viburnum, Privet, Boxwood, Trumpet vine, Peanut, Horseradish, Rutabaga, Cabbage, Pepper, Cantaloupe, Watermelon, Pumpkin, Strawberry, Okra, Cotton, Tomato, Mint, Radish, Rhubarb, Eggplant, Potato, Spinach, and Cowpea among many others are susceptible to Verticillium Wilt.

Redbud Verticillium Wilt- *Verticillium dahliae*



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Barberry Verticillium Wilt- *Verticillium albo-atrum*



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Okra Verticillium Wilt-

Verticillium albo-atrum



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Oak Metsulfuronmethyl

Damage-Abiotic



Russ Parker, University of Arkansas Cooperative Extension

Oak

Injury to oak trees has been linked to uptake of some popular lawn care products by the plant roots. Injury has been most commonly reported following spring applications when trees are beginning to start new growth. Metsulfuronmethyl (MSM)-containing herbicides such as Manner, Blade, and Patriot have been found to cause damage to landscape plants, with oak especially vulnerable. Symptoms are stem die-back, brown "fried" or "scorched" foliage, delayed leaf appearance, and patches of necrosis (dead tissues) in the phloem (plant's vascular tissues). Trees may appear bushy due to stem and leaf growth at the base of old stems, while the upper portions of the stems do not leaf out. This is a common symptom. Injury symptoms are typically reported two to four weeks following applications. Always apply only per label. Do not apply above the root zone of valuable plants. Trees and shrubs should not be planted in turf target zones for at least one year after the last application of one of these products. Avoid planting bedding plants in these areas for two years after last application of Metsulfuronmethyl. Affected trees and shrubs may fully recover over time, but that depends on plant age, health, and how much herbicide was taken up by the roots.

