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COMMON PROBLEMS OF RHODODENDRON, MOUNTAIN LAUREL, AND AZALEA

The broad-leaved evergreens rhododendron, mountain laurel, and azalea are commonly affected by several physiological disorders and diseases in Connecticut.

LEAF SPOTS: Fungal leaf spots appear as dead areas of tissue scattered over the surface of the leaf. They usually have distinct margins, often with brown, black, tan, or reddish centers, and darker margins. The spots can vary in size from pin-head to those that encompass the entire leaf. Management of fungal leaf spots can be achieved using a variety of strategies. Leaf spots are rarely serious enough to warrant chemical control and are often effectively controlled by following good sanitary and cultural practices. In autumn, it is important to rake and remove fallen leaves from the vicinity of the shrub since many of the leaf-spotting fungi overwinter on fallen leaves and plant debris. This practice reduces the number of spores available to infect emerging leaves in spring. It is also important to follow good cultural methods that promote plant vigor. These include proper watering and fertilizing, appropriately timed pruning, and insect control.

In some cases, leaf spots can become serious and result in injury (i.e., branch and twig dieback) or even plant death. This is especially problematic on weakened or stressed plants. In such cases, chemical control is often necessary, especially in cool, wet springs. There are several fungicides registered for use in control including thiophanate methyl, chlorothalonil, and mancozeb. The pesticide label will contain information for use with specific plant hosts and fungi, dosage rates, and safety precautions. Since most leaf-spotting fungi infect in spring as new leaves are emerging, the first fungicide spray is applied at budbreak. Two or three additional sprays are subsequently applied at 7-14 day intervals, depending upon the pesticide label. Additional applications may also be necessary in unusually wet springs. When symptoms are visible on the new leaves, it is usually too late for chemical control.

WINTER INJURY: Winter injury or winter drying of broad-leaved evergreens commonly occurs on shrubs growing in both wind-swept and sheltered locations. This is a general term applied to a group of environmentally caused problems which have little in common but that they occur during the winter. Winter injury is important in and of itself but it also predisposes shrubs to secondary or opportunistic pests. Causal factors are diverse but include sudden

temperature fluctuations, excessive or late season fertilization, lack of snow cover, and late spring frosts. Often the effects do not show up immediately. Symptoms can be varied but are usually characterized by marginal or tip browning of leaves, dieback of growing tips, and bark splitting. Water evaporates from the leaves on windy or on warm sunny days and cannot be replaced since the water in the soil is still frozen or unavailable to the plant roots. While there is no cure for this physiological disorder, there are steps to help minimize the effects of winter injury. These are 1) select an appropriate site for planting and maintain shrub vigor by good cultural practices; 2) deep water shrubs before the ground freezes in the fall and mulch around the base of the shrub to provide and maintain sufficient moisture in the root zone; 3) fertilize at the proper time and rate- avoid late summer and early fall fertilization which encourages growth that does not harden off properly; 4) prune out dead or dying branches or twigs in spring; and 5) construct physical barriers such as wind breaks to minimize drying winds.

CHLOROSIS: Broad-leaved evergreens growing in naturally alkaline soils, near new cement walls or foundations, or in heavy or poorly drained soils often develop chlorotic or yellowed leaves. Under the former two conditions of high soil pH, the shrubs are unable to absorb iron and the leaves yellow and often abscise. This physiological disorder can usually be corrected by treating the soil with an iron chelating compound or by lowering the soil pH. Under conditions of heavy or water-logged soils, leaves yellow because plants are unable to absorb nutrients since feeder roots have been damaged by excessive soil moisture and lack of oxygen. This condition is often irreversible if damage is extensive. However, efforts to improve soil texture and drainage will help if the problem is recognized early.

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