Powdery mildew can be a problem for gardeners

Gardeners face a variety of issues in the landscape that can cause destruction to plants. One of those culprits is powdery mildew. Powdery mildew is a fungal disease that affects many host plants, including ornamentals, shrubs and trees. On some ornamental plants, such as rose, lilac, ash, crapemyrtle, oak, photinia and zinnia, the disease can be very destructive.

The severity of the disease depends on the variety of the host plant, age and condition of the plant, time of infection and weather conditions during the growing season. If diagnosed early, powdery mildew can be effectively controlled to prevent severe damage to plants.

The first sign of the disease is the development of a white to gray or slightly brownish growth of mycelium over the surface of leaves or other plant parts. Powdery mildew fungi may also attack stems, buds and flower petals of various ornamental plants. Powdery mildew may cause the curling and twisting of broadleaf plants and a reduction in size of infected leaves. Infected buds may fail to open, and infections can spread to mature flowers, causing a flower blight. Also, nuts of the pecan can be infected, causing a reduction in quality.

Humid conditions with widely fluctuating temperatures, which isn’t unusual for Oklahoma, increase the occurrence of powdery mildew. The disease is common in crowded plantings where air circulation is poor and in damp, shaded areas. This is another reason spacing and well-drained soil are important when planting. Disease development is enhanced when cool, moist nights are followed by warm daytime temperatures.

Several practices will help reduce or prevent development of powdery mildew. Before plants are purchased, it may be to your advantage to inquire if the ornamental variety desired has any resistance to powdery mildew. If only susceptible varieties are available, avoid planting in low, shady locations. If powdery mildew becomes a problem, removal and destruction of infected plant parts, should be practiced.

Another option is to prune crowded plant material to help increase air flow around leaves. Late summer application of nitrogen fertilizer should be avoided to limit production of succulent tissue, which may be susceptible to powdery mildew infection in the fall. Water only in the mornings so that the foliage will be dry by evening.

If cultural controls fail to prevent disease build-up or if the disease pressure is too great, fungicide spraying may be necessary. The best course of action is to combine both approaches, using cultural methods as well as following a good spray schedule.
When powdery mildew has been a problem in previous years, a recommended fungicide spray schedule should be started in the spring as new growth develops. The fungicide also should be applied during the flowering period to avoid blossom blight. Be sure to follow the instructions on the label for use on specific applications.

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