

## **Managing Plant Disease in the Landscape with IPM**

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Integrated Pest Management is a strategy to minimize damage from plant diseases by learning about the pathogen and its biology in order to choose the most effective management strategy. In IPM, management options include genetic resistance, cultural control practices, biological control, chemical control or a combination of several management practices. By August, many active plant diseases can be found in the landscape including leaf spots and blights, cankers and galls, root rots and wilts. This is a prime time to submit a sample to the UMN Plant Disease Clinic for an accurate diagnosis of the problem. Many plant pathogens are reproducing and actively growing at this time, providing a variety of signs and symptoms to aide in diagnosis.

August is not always the optimal time to implement management strategies however. Understanding the biology of the pathogen allows you to decide what management strategies will be effective now, and which are better implemented at different times of the growing season. Canker and gall infections can be flagged this time of year to prune and remove during the dormant season when risk of infection of the pruning cut is low. Removal of leaves infected by fungal and bacterial leaf spot and blight pathogens throughout the growing season and after first frost can reduce pathogen spread and survival from one growing season to the next. Although this is true for many fungal and bacterial foliar pathogens, the fungi that cause rust and powdery mildew may overwinter on an alternate host or in infected buds. In addition, spores are readily spread on the wind for both rust and powdery mildew fungi, making fall sanitation largely ineffective against these two pathogens. Fungicide and bactericide applications to protect plants from leaf spot and blight disease are most effective when applied before disease occurs or when infection levels are very low. Although clients may call with disease problems at the end of the growing season, it is often too late to effectively use chemical control to manage foliar blights.

Learning about diseases in the landscape now can allow you to create a solid management plan for the end of this growing season and all through the next.