

**Help, I'm Seeing Spots**  
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It is that time of the summer when leaf diseases start showing up in strong force on trees, shrubs, vegetables, and fruit plants. These include blights, powdery mildew, rusts, and downy mildew, just to name a few. Should we be overly concerned about these problems right now? My answer is yes and no. This may seem slightly indecisive but there is a definite method to my madness.

In order to determine the answer we must ask a few questions. First and foremost, we must determine what species we are dealing with. Secondly, the size of the spots, as this can affect photosynthesis. Larger spots will block out more light than smaller ones. Are the newer or older leaves more affected? What color are the spots? With these facts involved it is much easier to determine if the leaf disease is going to be a problem in the future.

Many leaf diseases do not seriously harm ornamental plants. In field crop conditions it can be disastrous, as yield and even harvesting can be greatly affected. But in the home landscape and garden this may not be a concern. Typically, the aesthetic value is of greater importance to the homeowner. This is where leaf problems become a big concern. When we look at a plant we see the leaves; if they don't look good our assumption is that something is wrong.

Leaf diseases on deciduous trees and shrubs (those that lose their leaves in the fall) typically do not experience long-term damage. Evergreens, on the other hand, tend to be more affected by leaf diseases as they retain leaves for several years. Leaf diseases on fruits and vegetables can have an impact on yield, which can be a problem.

Leaf diseases like all plant diseases require three conditions are present in order for disease to state. These three conditions make up what we call the disease triangle. First, a susceptible host must be present. Without a host disease can not start. Secondly, we must have a virulent strain of the pathogen. Again, without a pathogen no disease will start. Lastly, environmental conditions must be favorable for disease development. In the case of many leaf diseases these conditions are cool and wet, warm and humid, or warm and wet. Many diseases require a certain temperature range along with either high humidity or free moisture on the leaf surface.

Fungicides can be effective against many leaf diseases. Unfortunately, fungicides protect the foliage and do not cure the disease. By the time we see disease starting it is often too late to spray. The best disease prevention is good cultural practices like raking up leaves, removal of diseased leaves and branches, proper fertilization, watering, and insect control. Raking up leaves in the fall will reduce spores next year for many fungal pathogens. Fertilization and watering contribute to the general health of trees and shrubs and insects and diseases tend to attack stressed plants more often. If you take good care of your landscape plants they will in turn treat you right. Remember that leaf spots are common each year for many plants. Take some prevention and you will not have to worry about these problems.

For more information on leaf diseases or any other horticultural topics feel free to contact me at 605-394-2188 or email to [ricky.abrahamson@sdstate.edu](mailto:ricky.abrahamson@sdstate.edu). Consider visiting us online at <http://www.co.pennington.sd.us/extension/extsvc.html> for updated extension information.