

With the cold, wet, cloudy spring that we've been having, plant diseases could be even more of a problem than usual. Diseases need three things to be "successful". If you remove one of the three things from the environment, the disease can't occur. The first is the host plant. Specific diseases can only infect specific plant species. The second is the pathogen, or the organism that actually causes, or spreads, the disease. The last is the proper environment for the pathogen. If the pathogen cannot survive in the environment, there is no chance for it to infect the plants. There are some things that you as a plant owner can do to try to prevent diseases from occurring.

The first thing that you can do to prevent disease is to choose the right plant. While plants that don't get diseases don't exist, just as no human is healthy one hundred percent of the time, certain species do better in the sun than in the shade, and vice versa. If you plant a tree that prefers shade in a full sun location, it will not do as well as the same plant in a shaded location. Because it will not be as healthy as it could be, this could put it at a higher risk for disease. There are also cultivars of plant species that are more resistant to disease than others. While this doesn't mean that the plant won't get the disease, it does mean that it is less likely that it will occur. For example, apples are susceptible to apple scab. But the Liberty apple tree is less likely to get apple scab than a Fuji apple tree that is not resistant.

While you can't prevent the disease from appearing, you can prevent spreading it. Clean your tools often with a bleach solution that will kill bacteria. It also helps to remove dead and diseased material and any plant debris, such as dead leaves, that were around a diseased plant as some diseases can survive and produce more spores or bacteria in dead plant material. It is also recommended not to water the plant from the top, as splashing can spread spores. Plants that have been damaged are also more susceptible to disease, because there is an open wound for the inoculum to go through to infect the plant. Precautions should be taken to minimize the amount of damage to the plant when it is being planted, or pruned. If a plant is pruned improperly, or there is an open wound at the wrong time, the plant can be more susceptible to diseases. Most pruning should be done either in the late fall or the early spring while the plant is still dormant. Wounds can also occur from leaving tree straps or trunk guards on for too long.

Even though we can't control the weather in Nebraska, we can control some of the environmental aspects that make a plant more susceptible to disease. For example, better air flow will increase the gas exchange between the air and the leaf surface, allowing for more carbon dioxide into the plant, increasing the physiological processes like photosynthesis and respiration, resulting in a healthier plant. This is why it is so important to pay attention to spacing when putting new plants into the landscape. Moisture is also a factor in some diseases. Mulch is a good thing in that it helps keep moisture in the soil after watering, but if the mulch is right next to the trunk of the tree, it can trap moisture next to the bark and cause it to rot.

While these practices don't guarantee that your plants won't get diseases, it could help lower the chances of a disease occurring. For more information on gardening tips, contact Miranda Earnest at the Buffalo County Extension Office, 308-236-1235 or mearnest2@unl.edu.