

Pesky Plant Diseases

Fire blight, powdery mildew, nematodes, bacterial wilt, anthracnose, and a host of other diseases often plague flowers, shrubs, and trees in the landscape. A plant disease is anything that disrupts the normal growth function of a plant, such as, photosynthesis and water uptake. Plant diseases are categorized as infectious and non-infectious. Infectious diseases are those which can spread from plant to plant and are attributed to bacteria, fungi, nematodes, and viruses. Non-infectious diseases are not passed among plants and are usually caused by poor or inadequate cultural controls, such as over-watering, nutritional imbalances, or even air pollution. A few common infectious plant diseases in the North Texas area include powdery mildew, bacterial wilt, and parasitic nematodes.

Powdery Mildew - A deleterious fungus appearing as white or gray spots on the surface of plant leaves. Common in humid weather but can occur in arid conditions. Powdery mildew is exacerbated by overhead watering and poor air circulation.



Bacterial Wilt - Pathogenic bacteria which causes wilting in stems and leaves often leads to plant death. The bacteria cause a condition that inhibits water movement within the plant. Bacterial wilt is spread by cucumber beetles, flea beetles, and grasshoppers as they feed on plant shoots and leaves.



Parasitic Nematodes - Microscopic roundworms, which inhabit soil; the worms puncture plant cell walls to extract contents of cells. Plants appear wilted, stunted, and yellow, while roots exhibit irregular swellings commonly called "knots". Nematode transmission occurs via water or through infected soil encrusted on unclean garden tools. Diagnosis is usually by soil or root sample to local extension agent or testing lab.



Did you know...

It takes 500 years to produce just under an inch of topsoil, which is the most productive layer of soil.

Prevention of Plant Diseases

Here are some techniques & practices to help minimize or prevent plant diseases.

Plant Diversity - Install an assortment of varieties and cultivars. Use disease and pest-resistant varieties native or adapted to the area and climate.

Hygiene - Ensure garden implements and tools are clean and properly maintained.

Observation - Periodically scout plants for signs of disease or pest infestations.

Location - Ensure plants are not over-crowded and have good air circulation.

Hydration - Practice correct watering techniques. Use drip irrigation and limit over-head watering.

Soil - Install plants in clean, fertile soil only from a reputable supplier such as Soil Building Systems.

Nutrition - Ensure plants are receiving adequate and appropriate organic nutrients.

Mulch - Mulches minimize water-loss, maintain soil temperature, and prevent transmission of soil-born pathogens.

Fertility - Compost added to soil prevents soil compaction, corrects soil structure, feeds beneficial soil microorganisms, and improves soil fertility.

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