



This bulletin from the Cooperative Extension Plant Health Clinic (Plant Disease Clinic) is an electronic update about diseases and other problems observed in our lab each month. Input from everybody interested in plants is welcome and appreciated.

Oak

We see many types of galls in the clinic. Several different groups of insects and one family of mites have the ability to induce plant galls, as well as fungi, bacteria, and viruses. Insect galls are abnormal growths of plant tissue brought about by insects. Gall-making parasites release growth-regulating chemicals as they feed, causing adjacent plant tissues to form a gall. The parasite then develops within the relative safety of the gall. The gall pictured here is a Cynipid gall called Fuzzy bead gall, and is made by a wasp species. The galls usually do little damage to the tree. If the tree is small enough to make control practical, galls can be physically removed from the tree, and the tree sprayed with pesticides at bud swell in the spring.

Fuzzy bead gall



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Fuzzy bead gall



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Soybean

Target spot, *Corynespora cassiicola*, is a fungal disease of soybean that can attack all parts of the plant. Symptoms, however, are most noticeable on leaves and pods. Leaf lesions are round to irregular, reddish-brown, and vary from specks to spots 10-15mm in diameter. The spots are usually surrounded by a dull green or yellow halo. Larger spots typically are zonate, giving the disease the common name Target spot. Severely infected leaves may drop prematurely, impacting yield. Pod spots are generally circular with slightly depressed, purple black centers, and brown margins. Spots may coalesce and cover the entire pod when environmental conditions are wet for extended periods. When the fungus penetrates the pod, seed may have small blackish lesions. Many varieties are tolerant of Target spot. Never-the-less, the clinic has had many samples in the last few weeks due to unusual periods of extended, heavy rainfall. Fungicides used for other common soybean foliar diseases are effective against Target spot.



Target spot



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Target spot



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Turf

Dollar spot caused by *Sclerotinia homoeocarpa* is a common disease of most species of turf grass. Home lawns may exhibit irregularly shaped bleached patches, 1-6in. or more across. These areas may coalesce to cover large areas. On closely mowed turf such as golf greens, the patches rarely get larger than 4-5in. White cobwebby mycelium may be seen on the spots when dew is on the grass. Leaves develop a lesion that is first chlorotic, then water-soaked, and finally a bleached color. Lesions are typically bordered by a tan to reddish-brown margin. They enlarge to extend across the entire width of the blade, and are often hour-glass shaped. Tip dieback is also common. Leaves may have a single lesion, several lesions, or be completely blighted. Control consists of maintaining adequate to high nitrogen during dollar spot activity, watering deeply early in the day, mowing at recommended heights, and fungicides. Commercial turf people may use Daconil Weatherstik, or Chipco 26019 50W, or Eagle 40WSP, or Fore 80W, Banner MAXX, or Insignia. Homeowners may use Spectracide Immunox, or Green Light Fung-Away Systemic Fungicide, or Ortho Lawn Disease Control.

Dollar spot



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Pistachio

Panicle and shoot blight of Pistachio is a serious threat to the Pistachio industry in some parts of the United States and overseas. It is caused by the fungus *Botryosphaeria dothidea*, a common fungal pathogen of many crops. Symptoms appear in mid-late spring as circular, black spots, 1-2mm in diameter, on leaves, shoots, and rachises. Black lesions develop at the base of shoots originating from infected buds. Leaves on infected shoots wither in 3-5 days. Petiole lesions kill individual leaflets and entire leaves. Dead leaves begin dropping by July. Clusters of elongated spots appear on the midribs of leaflets. Small, round, black, spots appear on leaf blades. As the season progresses, the spots enlarge into irregularly shaped brown lesions, up to 15mm in diameter, surrounded by a diffuse, slightly chlorotic halo. The spots may coalesce into large tan blotches. Defoliation can be severe in late summer. A hundred or more tiny, black pin sized lesions may develop on the fruit. The fruit turns black as the lesions enlarge, Entire clusters may be damaged. Cankers can develop around bud scars and wounds. Control is best achieved fungicides, pruning, and irrigation management. Multiple applications of strobilurin, dicarboximide, or de-methylation inhibitor fungicides are required in summer. One application of benzimidazole at bloom improves the efficacy of the summer treatments. Prune infected parts 5cm below the blighted margins in late summer. Lower the sprinklers so the spray does not reach the canopy. Clean up fallen leaves.

Botryosphaeria shoot blight



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Clematis

Clematis are wonderful easy to grow perennial vines that come in a wide range of bloom size, color, and growth habit. They are absolutely splendid winding through an arbor as companions to climbing roses. The vine needs 5-6 hours of sun a day for best blooming although some varieties tolerate bright shade very well. Clematis requires good average garden soil with excellent drainage. They benefit from having their root zone mulched or otherwise shaded. They are slow growers the first few years. A common problem with clematis is a disease called Clematis wilt. Clematis wilt is caused by several fungi with *Ascochyta clematidina* being the main culprit. Wilt occurs when the fungus penetrates the stem into the nodes. Leaf lesions may or may not occur. Wilt can happen at any time but is common just as blooming starts. Usually only one or two stems are affected. Leaves and stems turn blackish-brown and collapse. Cross sectioning at the stem nodes reveals dark brown areas. This is usually not fatal to the plant. Wilted stems should be pruned back to healthy green tissue even if this means cutting the stems all the way to the ground. A protective ornamental fungicide is sometimes useful, but plants usually recover without fungicide treatment.

Clematis wilt



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