

Black Knot Disease of Cherry and Plum



Black knot disease occurs on numerous cultivated and wild plums, prunes, and cherries (*Prunus* spp.). The disease is characterized by the presence of warty, black galls that may vary in size from ½ inch to more than one foot in length. In some parts of the Northeast and Midwest, black knot causes serious losses to commercial plum and prune growers. More often, however, the grotesque galls draw attention from homeowners who want to improve the unsightly appearance of affected landscape trees.

Symptoms. The first symptom is small, light brown swellings of the current or last season's growth. These swellings are often not noticed and the disease becomes evident only after the knots have enlarged and are olive-green with a velvety texture the following spring. Soon after this stage the knots become darker and by fall they appear as the black hard knots that are the typical symptoms observed. So the disease may not be recognized until a year or more after infection. Knots will continue to grow until they girdle the branch and kill it.

Disease cycle. Black knot is caused by a fungus, *Apiosporina morbosa*. Infections occur between April and June during warm, wet weather. The fungal spores are produced on living galls that are one to several years old. Usually young succulent twigs are infected.

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Management. Depending on the severity of the disease and the degree of control required, recommendations may include one or more of the following:

- Prune out all knots during the winter season. Prunings should be destroyed or buried so that fungal spores cannot spread from these to cause new infections. For most home grounds situations, this should give enough control unless there are numerous infected wild *Prunus* spp. in the neighborhood.
- Fungicide sprays may be necessary if the disease has been severe in the past and eradicating black knot infections on wild *Prunus* spp. is impossible. Rain is very conducive to infection, so sprays must be applied before rain to be effective. The fungicide recommended for managing black knot on ornamental plantings is thiophanate-methyl (Cleary's 3336) when dormant and at pink bud, full bloom, and three (3) weeks later. Follow label directions on the fungicide package. For trees used for fruit production, apply captan. Captan may cause injury on "Stanley" and Japanese-type plums if used repeatedly in early-season sprays. Once the disease is established, it may require two to three years of vigorous control effort to bring it back under control.
- In new plantings, resistant varieties may help reduce the damage caused by this disease. The plum variety, President, has shown high resistance. Moderately resistant varieties include: Methley, Milton, Early Italian, Brodshaw, Fellenberg, Shiro, Santa Rose, and Formosa. Shropshire and Stanley are very susceptible.

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