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Ugly Black Warty Growth, Black Knot

Every year I receive calls and e-mails from individuals asking me what is that ugly black warty growth on my plum and cherry trees? The culprit is Black Knot.

Black knot (causal organism *Apiosporina morbosa*), is a common disease of both wild, ornamental, and fruit bearing plum and cherry trees. Occasionally, black knot is observed in apricots and peaches and other plants in the *Prunus* genus. Black knot is distinctly characterized by distorted, black elongated gall-like growths on branches. Initially, this disease will infect fruiting spurs, stems and branches of susceptible plants, and occasionally the main trunk too.



The infection window of Black knot occurs in the springtime when new growth is about 1-inch long. Spores are moved through blowing winds and splashing rains, then discharged in moderate to heavy amounts during the pink blossom stage of cherry or plum and ends when new growth stops.

Symptoms

On infected plant parts, abnormal growth of bark and wood tissues produce small, light-brown swellings that eventually rupture as they enlarge. In late spring, the rapidly growing young knots have a soft texture and become covered with a velvety, olive-green growth of the fungus. During summer, the young knots turn darker and elongate. By fall, they become hard, brittle, rough and black. The following growing season the knots enlarge and gradually encircle the twig or branch. The cylindrical or spindle-shaped knots may vary from one-half inch to a foot or more in length and up to 2 inches in diameter. Smaller twigs usually die within a year after being infected while larger branches may hang in there for several years before being girdled and killed by the fungus. As the disease progressively worsens each year Black knot will stunt or kill the tree unless effective control measures are taken.

Control

Several things can be done to control black knot: Buy disease-free trees and if possible resistant varieties such as President (plum). Never accept trees with swollen branches or knots. Before you start your orchard, scout the vicinity and if possible, remove wild cherries and plums near the orchard to remove sources of inoculum. If you discover black knot in your landscape or orchard, remove all knots during the winter by pruning 6-8 inches below the knot.

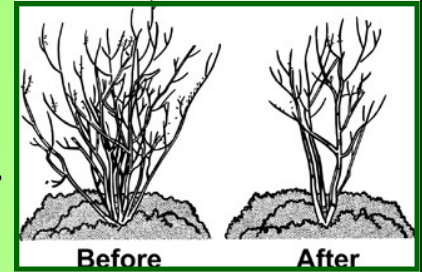
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Pruning Trees and Shrubs: A Few Tips

Pruning is one of the most important cultural practices for maintaining woody ornamental trees and shrubs. Knowing why, when, and how to prune correctly will make the difference between a healthy, aesthetically pleasing plant and one that is unhealthy, misshapen or both.

The time to prune varies with plant species. Spring-flowering shrubs are typically pruned after bloom to avoid flower removal from the previous year's growth. Summer-flowering shrubs are generally pruned during the dormant winter season. For non-flowering shrubs, the best time to prune in most cases, is before growth begins in the spring.

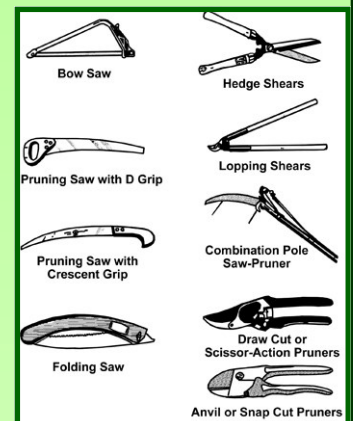


There are numerous reasons for pruning. Sometimes, you may desire to train or direct the growth of plants into a particular form or within a specified space, like a formal hedge. Or you may want to prune mature plants to control or limit their size and shape, as in the case of fruit trees. For fruiting plants, pruning plays an important role in improving overall fruit quality, primarily by increasing light penetration into the tree. The best time to prune for fruit trees and berries is springtime before the buds begin to flower.

Unfortunately, many people approach pruning with a great deal of apprehension. Others view pruning as a chore and give little consideration to technique as they hastily get the job done. Proper pruning requires a basic understanding of how plants respond to various pruning cuts.

When pruning, first remove any dead, diseased, or damaged wood. Then carefully select and remove branches while maintaining the natural shape of the plant. There are five basic techniques for pruning shrubs:

- 1) Pinching - removing the tip of a succulent, green shoot before it becomes woody and firm. This is done to reduce length and encourage branching.
- 2) Heading back - cutting a branch back to a healthy bud or branch to stimulate growth and increase bushiness.
- 3) Thinning - removing a branch at its point of origin (ground, parent stem, trunk, side branch, etc.) to create a more open plant without stimulating new growth.
- 4) Renewal pruning (rejuvenation) - removing the oldest branches by pruning them near the ground, leaving the younger, more vigorous branches (which may also be pruned). Examples include: Abelia, deutzia, forsythia, spirea, and weigela are pruned using this method.
- 5) Shearing - removing the tips of most branches with shearing or hedge clippers. Shearing should be used sparingly as it destroys the natural shape of the plant and inhibits light penetration, eventually causing dieback in the interior of the shrub.



Proper pruning can lengthen a shrub or tree's life, increase its value, and minimize liability problems. Incorrect pruning can cause pest and decay problems, increased liability and greatly reduce the tree's life span. Topping is an example of improper pruning and is one of the worst things you can do to your tree. Topping is the indiscriminate cutting back of tree branches to stubs. Most people top their trees to reduce its size. Topping stresses trees, causes decay, creates hazards, and ruins the natural beauty of the tree. Trees that have been topped are more prone to storm damage as well as insect and disease problems.

Finally, remember that some plants bleed heavily after pruning. Bleeding is unsightly but usually harmless. Trees subject to bleeding should be pruned in the late spring or early summer when leaves are on the tree. Actively growing leaves tend to reduce the amount of bleeding from pruning cuts and allow the cuts to heal more quickly. Plants that bleed readily include willows, birches, maples, beeches and dogwoods.

June Horticulture Tips

Lawns

- Do not fertilize cool season lawns between April through August.
- If broadleaf weeds are present, pull them while they are small or spot treat with a broadleaf herbicide.
- Mow Fescue and bluegrass lawns at 3 inches.
- Recent wet weather may induce red thread or brown patch fungus disease to start developing in many lawns. The best steps to reduce the spread of the disease is to have a soil pH of 6.0-7.0 along with adequate levels of phosphorous and potassium. Avoid mowing when the grass is wet. Fungicides sprays are an option.



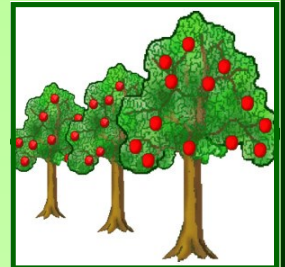
Vegetables

- Plant beans, lima beans, beets, carrots, Swiss chard, corn, cucumbers, okra, southern peas, pumpkins, and turnips.
- Side-dress vegetables 6 weeks after planting.
- Plant pumpkins and other winter squash for a fall harvest.
- Assure that vegetables get a least one inch of water per weeks. Do not wet foliage late in the day. Consider drip irrigation.
- While squash plants are still small, apply *Bacillus thuringiensis* (Bt) to stems weekly to prevent squash vine borers. Scout for insects. Hand pick, or if necessary to save the crop, use the least environmentally harmful insecticides.
- Spray tomatoes weekly with fungicide to prevent early blight and late blight diseases.
- Start Brussels sprouts and collards for transplanting into the garden in mid-July.



Fruits & Berries

- Protect blueberries and raspberries with bird netting.
- Early summer rain has produced perfect conditions for lots of black rot to develop on grapes, as well as brown rot on peaches and nectarines. At this point, if you have not been applying fungicide sprays on a regular basis, you probably already have problems. Products containing Captan are most effective.
- July is a good time to remove suckers and water sprouts from fruit trees.



Trees Shrubs & Flowers

- Water newly planted trees and shrubs weekly if rain is inadequate.
- Prune out dieback on rhododendron, azalea, and mountain laurel.
- Remove dead flowers in flower beds to encourage longer flowering.
- Cut off the faded flowers of perennials to encourage a second flowering.
- Install supports for tall-growing flowers before they start to flop.
- Pinch back chrysanthemums to develop bushy plants with more flowers.
- Nothing perks up a patio or entry like a colorful container garden. You can create great looking containers without relying on flowers. Combine colorful foliage plants such as sweet potato vine, purple heart, coleus, wandering Jew, creeping Jenny, dusty miller, crotons, ivies and grasses.



Black Knot Control cont. from pg one

Knots remaining on the tree will only serve as a source for new infections. Consider pruning in the early spring as a follow-up to remove missed knots from the winter. Sterilize pruners between cuts by dipping them in a 10% bleach or Lysol solution. Burn, bury, or otherwise remove pruning's from the area as they may still be an active source of infection. Severely infected trees should be removed entirely. After pruning, a dormant spray of lime sulfur may help when pruning heavily infected trees. Later, fungicides such as Captan, Chlorothalonil, and Copper products have been effective against black knot and should be applied at budbreak and then every 7-14 days prior to a rain event until terminal growth stops.

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