

Why do my fruit trees have black growths?

Question: Why do my fruit trees have black growths?

Answer: Black knot fungus is a common tree disease, and it is caused by a fungus *Apiosporina Morbosa*. It mostly affects fruit trees like cherry and plum trees, both cultivated and wild. It manifests by creating and developing knobby dark or black growths on the branches and trunk.

Photos: <https://tidcf.nrcan.gc.ca/en/diseases-caused-by-pathogens/factsheet/4>

Black knot on fruit trees

- Black knot is a common fungal disease of *Prunus* trees including ornamental, edible, and native plum and cherry trees.
- Hard swollen black galls (tumor like growths) form on branches and occasionally on trunks.
- Many *Prunus* trees tolerate black knot. Tolerant trees have many galls throughout the tree with few negative effects on the health of the tree.
- Some *Prunus* trees are more severely affected by black knot. In these trees, leaves and shoots wilt and die on branches with galls.
- Management will vary depending on how severely the tree is affected by black knot. This tree disease spreads during spring, as that's the time of the year when it rains the most. It's a perfect season for the fungus to release spores. The wind carries the spores and helps them find their way to the unhealthy branches and newer growths.
- While outbreaks are most common for wild trees, they can spread to your yard if you don't maintain your trees and your property. The trees that are most susceptible to black knot are weaker and younger trees. However, healthy, big, and older trees are able to resist it.
- The black knot fungus overwinters in the galls on branches and trunks.
- The fungus grows within the branch for several months with no outward symptoms of the disease.
- As the fungus grows, it releases chemicals that make the tree grow extra plant cells that are unusually large. This unusual growth results in the swollen and woody galls.
- Galls are made up of both plant and fungus tissue.
- One year after the infection, galls can be seen as a swollen area of the branch with a velvety olive green covering the fungal growth.
- Two years after the infection, the gall has turned black and hard. These galls release spores in the spring when wet.
- Sometime the branch and the gall die after the spores are released in early spring. If the branch lives, the gall keeps getting bigger and produce new spores each spring.
- The gall can completely encircle and girdle a branch. When this happens the leaves beyond the gall wilt and die.
- Although the black knot fungus will not cause the trunk to rot, the cracks from the infection can let in other wood rotting fungi.

Branch symptoms

- Black knot galls are most noticeable during fall and winter after all the leaves have fallen.
- Knobby, swollen black growths called galls grow along the length of stems and branches.
- In early summer, young galls or new areas of growth on the edges of older galls are covered with velvety, olive-green spores.
- These galls turn black and hard by the end of the summer.
- Infected branches may bend to one-sided due to growth of the gall.
- There can be anywhere from a few galls to hundreds of galls within the tree canopy.

Leaf symptoms

- Leaves remain healthy and green even on branches with galls in black knot tolerant trees.
- Leaves wilt, turn brown and die on branches with galls in trees that are highly susceptible to black knot.
- Brown, wilted leaves at the end of branches are often scattered throughout the tree on highly susceptible trees.

Trunk symptoms

- Large areas of rough black swollen bark form on the main tree trunk.
- Black knot galls on trunks are often cracked and may ooze sticky liquid.
- Wood decay fungi may enter the trunk through cracks caused by black knot galls and cause wood rot.

Black knot can be controlled using a combination of prevention and sanitation.

- Remove all knots and swellings by pruning 3-4 inches below the knot during the dormant season before April 1st. Where infections occur on larger branches, excise infected tissue down to healthy wood.
- Sterilize cutting shears with 70% rubbing alcohol to limit the spread of the disease.
- Burn, bury, or otherwise remove pruning from the area because they may still be an active source of inoculum.
- Severely infected trees should be removed entirely.
- A dormant spray of lime sulfur may be helpful when pruning heavily infected trees. If you are permitted to apply fungicides which have been effective against black knot should be generally applied at bud break and every week to two weeks, especially before rain, until terminal growth stops.

References

- https://extension.umaine.edu/ipm/ipddl/publications/5091e/?utm_source=chatgpt.com