

Q: I had a big problem with Peach Leaf curl on my Nectarine tree this year. What can I do to prevent this from happening again?

A: A fungus called *Taphrina deformans* causes the disease known as leaf curl or Peach Leaf Curl. It can affect the flowers, fruit, leaves and small twigs on nectarines and peach trees, and is a common problem in this area. Infected leaves emerge with reddish areas that become thick and deformed. The thickened areas on the leaves eventually turn a yellowish-gray color when the fungus produces spores. Those leaves will abscise (fall off), and are usually replaced with healthier looking leaves that will last through the summer. The tree will not die from the leaf loss, but growth and fruit production will be affected. Sunburn can also be a problem before the new leaves form. When twigs are infected, the shoots appear thickened and swollen, usually dying by the end of the season. If fruit is infected, reddish patches appear on the fruit surface that become corky and prone to cracking later in the season.

*Taphrina deformans* invades the space between leaf cells, causing the cells to grow larger than normal, accumulating red plant pigments. Cells of the fungus push through the leaf surface, producing structures called asci where ascospores are produced. These spores are carried by the breeze to plant tissues where they form structures called bud-conidia, capable of surviving the heat and dryness of summer. When cool weather and moisture return in the fall, the bud-conidia increase in number, eventually forming a film on the tree's surface. In spring, wind and rain spread the spores to leaf buds, and the cycle begins again. The fungus stops infecting young leaves when temperatures reach 80° to 85°F and the weather becomes dry.

To prevent Peach Leaf curl, you need to treat your trees every year after the leaves have fallen. Clean up all fallen leaves and prune out dead twigs. Remove these from your garden, or bury them in a hot compost pile. You will need goggles, gloves and a respirator. Spray with a copper-based fungicide, (Bordeaux Mix), tribasic copper sulfate, calcium polysulfides, metallic copper, or a synthetic fungicide. To be effective, copper containing compounds must have at least 50% copper, less than that % will not provide control. If it does not rain, and you have sprayed thoroughly, one spray may be adequate. If we have abundant spring rain, a second application may be needed before the buds begin to swell. Fungicides containing chlorothalonil also work well at this time. Be sure to wear the proper safety equipment and to use a calibrated sprayer. If you do not have the correct equipment, have a licensed contractor or arborist spray for you. For the safety information regarding fungicides call the Master Gardener office or check out <http://pmep.cce.cornell.edu/profiles/extoxnet/index.html>.