

Bacterial Canker and Gummosis of Stone Fruit Trees (Cherry Tree)

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Bacterial canker and Gummosis of stone fruit trees is one of the most important diseases of sweet cherry trees. The host, I found, of this bacteria had been infected very heavily. There were many dark brown to black cankers up the trunk of the tree with oozing gum protruding out of the swells in the bark. The tree looked to be weakened by the large canker that covered almost the entire length of the trunk from the base to the first branch. There appeared to be very little if any fruit production on the plant. Although it is hard to tell how much fruit was produced because, it was late in the fall when I had noticed the problem, and there were many birds and squirrels in the area that eat off of the fruit trees. The leaves were yellowing a bit but, I suspect that this was primarily the cause of senescence in the plant, but it could have also been brought on early by the added stress the bacteria were putting on the tree.

The bacteria that was causing gummosis of the tree is *Pseudomonas syringae* pv. *Morspanorum*. This strain is the most predominant in cherry and plum trees. The *Pseudomonas syringae* bacteria are ice-nucleation-active, meaning that it serves as nuclei for the formation of ice. This allows the bacteria that are over wintering in trees to cause frost injury at higher temperatures than



normal (Agrios, 443). When the weather is wet and cold the gum is produced in the cankers and eventually busts through the bark and oozes down the trunk or branches of the tree. The damage to trees is the most serious in young trees that usually die when infected by the bacteria (Smith, 476). Many buds can be killed resulting in a decrease of yields in larger trees.

There is no complete control by any single method for bacterial canker and gummosis of stone fruit trees but there are many useful practices that can help reduce the risk of infestation. First you can prune out any diseased areas of the tree making sure that you are using sterile procedures and equipment. When propagating you should make sure that you only use healthy budwood and susceptible varieties should be propagated on rootstocks that are resistant to the disease and grafted as high as possible. When selecting your trees in the nursery, be sure to select only the healthiest

and symptom free plants. If you are selecting a site for an orchard you should not choose an area that is subject to freeze damage, waterlogged soils or severe and prolonged droughts. There are sprays available with fixed copper as well as a Bordeaux mixture that can be applied to the trees in the fall and spring before bud break. However there are some varieties that are resistant to copper. Cankers can be controlled by cauterization with a hand held propane burner in early to mid spring. Hold the flame up to the canker for fifteen to twenty seconds until the bark and underlying tissue begins to crackle and crinkle. If it is necessary you can repeat this method in 2-3 weeks (Agrios, 445). The Best method of control however is to plant resistant varieties such as Early Burlat, Lambert and Corum (Smith, 476).

Works cited

Agrios, G.N. (1997). Plant Pathology. 4th Ed., Academic Press, San Diego, CA. pp442-445.

Smith, Michael D., (editor), (1994). The Ortho Problem Solver. 4th Ed., Monsanto Co. San Ramen, CA. p476.