

Fire Blight (*Erwinia amylovora*)

Fire blight (FB) is a major bacterial disease of apple in Minnesota. It also occurs in pear. FB bacteria can infect most parts of the apple tree including blossoms, shoots, stems, leaves, and the fruit.

Blossom blight can occur anytime after flower petals have opened enough to expose the pistil inside. This gives the bacteria a direct path to the interior of the plant. Infected flowers will first become water-soaked and dark green. Later, infected tissue will wilt and turn brown to dark brown.

Shoot blight is the most visible symptom of FB, and can occur after the tissue is damaged from hail, high winds, or other trauma. When a shoot terminal is infected the bacteria will move down the shoot, causing the tip to curl. During wet and humid weather, infected stems will exude a milky ooze made up of bacterial spores. **Cankers** may appear on limbs and trunks of small trees.

Infected fruit may appear small, shriveled, and develop a brown to black decay. FB bacteria can kill the fruit-bearing spurs, branches, and sometimes the whole tree.

Pruning to remove overwintering cankers can help reduce inoculum in the orchard. Pruning tools should be sterilized using 10% bleach or by flaming between cuts.



50. *Apple branches infected with fire blight*



Picture source: MSU

Infected developing fruit