



Challenging young trees with fungus



B3 Summer Science Camp at
Olympic High School 2016

Resistance is the trait being bred for

- These back-cross hybrids have been selected for *Cryphonectria* resistance, not *Phytophthora* resistance
- Very young trees are usually resistant – they have smooth bark so the fungus has nowhere to insert itself.
- There are many strains of the fungus – a pure culture of the test strain is grown in the lab.
- We need to be careful not to introduce anything from the bark or soil into the wound we create.

Bark /Blight (Cryphonectria parasitica)



Wipe the tree bark with an 70% ethanol dampened cloth, to sterilize the surface



Use a cork borer or punch to make a small hole in the trunk, through the bark (but not too deep) about 12-18 inches above the ground



Make plugs in the agar plate containing the fungus with a rigid plastic straw (or similar) – in the region where the fungus is white and fuzzy.



Sterilize a metal spatula - dip it in 70% ethanol, pull it out, hold next to lighter and flame it. Tilt it slightly down (so burning liquid runs away from your fingers) and hold over the ground, not your knees.



Pick up a plug on the end of the spatula and poke into the hole in the bark.



Cover the infected area with tape (so the fungus-agar plug does not wash away).
Mark the tree with a fluorescent ribbon.

