

# Root Sampling Protocol 2023

## FHDL Auburn University

### -----SUBMISSION INSTRUCTIONS-----

Samples are recorded and processed routinely by the date and time in which they are received. All samples will be initially processed within seven days of receipt with results available twenty-one days after processing. Some laboratory diagnostic techniques take longer than others, which may affect result punctuality. Each tree should be individually bagged and labeled.

### Sample Collection

Tree disease diagnosis is largely dependent on the quality of the sample and on the relevant information provided by the submitter. Samples must be of sufficient quality and quantity to allow for proper laboratory testing and pertinent information, such as sample tree identification, is essential.

1. Collect samples before the application of pesticides in order to increase the probability of recovering the causal pathogens.
2. Samples should be collected from symptomatic trees showing tinning/transparent crowns, foliage discoloration, and/or excessive cone production.
3. Samples should not be collected from dead or severely declined trees; determining the causal agent from such trees is highly unlikely. Samples should not be collected from dead roots for the same reason.
4. Two lateral roots on opposite sides of the tree should be sampled from the butt to the dripline.
5. Submit a generous amount of sample material to allow for all required laboratory processes: collect 12 to 18 inches of first order lateral roots that are  $\frac{3}{4}$  to 4 inches in diameter from each lateral root.
6. Carefully excavate to avoid unnecessary damage to the sample.
7. Excess soil should be removed from root samples. Samples should retain just enough soil to maintain moisture levels.
8. Do not add water or pack a sample in water.
9. Wrap samples in a dry paper towel and seal in a zip-top bag.
10. Keep samples refrigerated from collection to submission and do not expose them to high heat situations, such as baking in the sun or in the back of a vehicle.
11. Keep all samples in separate bags and label appropriately.
12. Complete a "Tree Disease Diagnostic Form" for each sample, available on the Forest Health Cooperative webpage (<https://fp.auburn.edu/ForestHealthCooperative/default.htm>).

## Sample submission

Samples may be mailed to the Forest Health Cooperative Diagnostic Laboratory or delivered in person to Dr. Lori Eckhardt at 3301 Forestry and Wildlife Sciences Building, Auburn University, Alabama 36849-5418.

1. All samples must be submitted with a completed "Tree Disease Diagnostic Form."
2. When submitting samples by mail, have the samples overnighted through either Fedex or UPS, then send us an email letting us know that you have sent us some samples, include pictures of the damage in the email. Dr. Lori Eckhardt (eckhlg@auburn.edu) and/or Jessica Baldwin (jmb0276@auburn.edu) **Do not use USPS, as they do not deliver directly to our building. Only ship samples between Monday- Wednesday. Samples should be mailed in an appropriately sized box, with padding, or in a padded envelope.**
3. If sample is a suspected high-risk pathogen, contact Diagnostic Laboratory personnel for appropriate packaging and mailing instructions.

