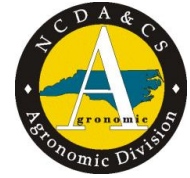


## Fee Increase for Nematode Species Identification by Molecular Diagnosis



### Notice:

On May 31, 2018, the Board of Agriculture approved initiation of the rulemaking process to update the Nematode Advisory Service Rule (Rule (02 NCAC 37 .0203). One of the changes in this rule increases the cost of rapid nematode identification (molecular diagnosis) from \$10.00 to \$20.00 to be more in line with what other State laboratories charge. No public comments were received on the proposed rule revision. The Board approved final adoption of the updated rule on November 14, 2018. The amended rule became effective on March 20, 2019.

Clients will be assessed the higher fee of \$20 per sample for nematode species identification by molecular diagnosis beginning November 1, 2019. Please note. The client will also be charged a \$3 per sample fee for a routine nematode assay since it must be performed first to collect genetic material for the molecular diagnostic procedures.

### Facts:

- ❖ Molecular diagnosis is the only way to identify most nematodes to the species level.
- ❖ The fee increase will go towards managing increased laboratory supplies and staffing needs to process samples.
- ❖ About 30% of samples submitted for molecular diagnosis require an additional analysis called DNA sequencing. These samples are sent to N.C. State University for this analysis which costs about an extra \$20 per sample. This cost is usually not passed on to the client.
- ❖ All molecular diagnostic samples are considered a high priority. They are processed immediately upon being received, even during the peak laboratory season.
- ❖ Requests for species identification by molecular diagnosis are rapidly increasing, primarily due to concern over the Guava root knot nematode (*Meloidogyne enterolobii*), a very damaging pest of sweet potatoes.
- ❖ More than 252 molecular diagnostic identifications have been performed since July 1 of this year, more than double the requests last year at this time.
- ❖ Since molecular diagnosis is very time consuming and expensive, growers should give careful consideration before requesting this test. The decision to request molecular diagnosis must be made upfront since the fee is charged upon receipt of the samples. Because of the high volume of samples handled by the Nematode Assay Lab, soil samples can't be held pending the results of a predictive assay to determine if root knot nematodes exceed the threshold for sweet potato.
- ❖ The Agronomic Division recommends that growers only submit three to five molecular diagnostic samples per farm. Each sample should represent a different field on the farm. A good sample will come from a mixture of multiple soil cores collected randomly across a field or known hot spots. Molecular diagnostic samples should be sent to the lab in a shipper marked clearly on the outside as "Molecular Diagnosis" to ensure expedited service. Molecular diagnostic samples should never be put on the same sample information form or placed in the same shipper as routine predictive or diagnostic samples.

- ❖ Growers should continue routine monitoring of nematodes in all their fields by submitting predictive samples in late summer or early fall. If a high population of root knot nematodes is discovered in one or more predictive samples, then the grower should consider resampling that field and requesting molecular diagnosis.
- ❖ To save labor and time, the grower may want to collect molecular diagnostic samples (three to five samples per farm) at the same time that predictive sampling is done, but the molecular diagnostic samples need to be shipped separately to the lab.