

Part XV.

# Diagnostic Laboratory Services

*NOTE: Access to the following laboratory services can be obtained through your local Virginia Cooperative Extension Office.*

## Pre-sidedress Nitrate Soil Test for Corn

Funded through the Virginia Department of Conservation and Recreation, field test kits are available for measuring soil nitrate concentrations. These tests should be conducted on cornfields with a history of manure or biosolids applications within the previous three years, on fields that received applications of commercial fertilizer nitrogen of 30 pounds or less in a starter band, or on fields of less than 40 pounds broadcast at planting. Test results are used to determine the most appropriate level of nitrogen to be applied as a sidedress on corn. Contact an Extension agent or a nutrient management specialist from the Department of Conservation and Recreation to assist with the test.

## Soil Testing

Soil samples are analyzed for specific soil nutrients to determine proper application rates of fertilizer and lime for optimum plant growth. Routine analysis includes soil pH, P, K, Ca, Mg, Zn, Mn, Cu, Fe, B, and estimated CEC. Soluble salts and organic matter tests are also available.

Sampling and mailing instructions are found on the sample boxes and forms, which should be sent directly to the lab with the soil sample along with any payment. Completed soil test results, along with a recommendation on fertilization and liming, are emailed to the client. For more information, go to [www.soiltest.vt.edu](http://www.soiltest.vt.edu) or contact your local Virginia Cooperative Extension office.

## Insect Identification - Department of Entomology

Insect samples and insect-damaged plant material are handled and processed through the Insect Identification Laboratory. Insects from any structural, plant, or animal hosts are accepted and are identified to the lowest taxonomic level needed for control decisions. Control recommendations accompany insect identification results, which are sent electronically to each Extension office. Extension offices are supplied with alcohol vials and mailing tubes for specimen shipment. Samples should not be submitted before reviewing instructions on the back of the insect identification submission form 444-113.

## Plant Diagnosis

The Plant Disease Clinic is a service lab to Extension offices that provides diagnoses of plant diseases caused by fungi, bacteria, viruses, and other plant pathogens, as well as diagnoses of abiotic problems and identification of nonweedy plants. Physical and/or digital samples can be submitted through local VCE offices. Your Extension agent or a staff member can provide the Plant Disease Diagnostic Form (VCE publication 450-097), which must be completed and included with each sample, and advise on proper sample submission. There is a fee for sample diagnosis. For further information on the Plant Disease Clinic and guidelines on sample submission, please visit the [Plant Disease Clinic website](https://spes.vt.edu/affiliated/plant-disease-clinic.html) at <https://spes.vt.edu/affiliated/plant-disease-clinic.html>.

## Weed Identification

Farmers and homeowners can submit plant samples for weed identification to the Virginia Weed Identification Clinic through their county Extension agent.

**Find your Extension agent:** <https://ext.vt.edu/offices.html>

### For agents:

- **Virginia Weed Identification Website:** <https://weedid.cals.vt.edu>
- **Weed Identification Clinic:** [https://agweedsci.spes.vt.edu/extension/weedid/\\_jcr\\_content.html](https://agweedsci.spes.vt.edu/extension/weedid/_jcr_content.html)

