

Sampling for Nematode and Potato Early Dying Analysis



1. We suggest testing the rotation crop the year prior to potatoes to best assess potato early dying management options. For nematode testing, any crop in the rotation can be targeted.
 - a. Divide the field into separate units for sampling based on past potato cropping history and disease. Walk a diamond pattern or zig-zag through each sample area. On irrigated fields you can follow an “inner” and “outer” wheel track for sampling.
 - b. Sampling units should not exceed 30 acres in size.
 - c. Smaller sampling units will give greater precision and improve management.
2. Sampling for *Verticillium* alone can be done the same as sampling for soil fertility using a soil probe.
 - a. Samples can be pulled any time during the growing season. To ensure the highest accuracy, it is not recommended to test fields during the winter months.
 - b. Plan ahead as the test will require 3-4 weeks for results
 - c. Ensure that the soil probe penetrates the tillage layer and shoot for about one probe per acre to make up a composite sample.
 - d. Mix the sample well prior to bagging then place about one pint of soil in a zip-lock bag.
 - e. For small fields or when trouble shooting areas, a composite sample should be made up of a minimum of 15 cores.
3. When both *Verticillium* and nematode testing is required, we suggest sampling during the peak in the crop’s vegetative growth, right before reproductive growth.
 - a. Take samples for nematodes with a shovel, exposing the moist root zone 3-8” deep. Soil and roots can be extracted by hand. If using a soil probe, omit the top 2” of the core.
 - b. Good samples for nematode testing have a volume of about one pint comprised of 70% soil and 30% roots. Use of a soil probe will not provide roots for a root test.
 - c. A soil probe in the same area can be mixed with the nematode sample for *Verticillium* testing, or care can be taken during the nematode sampling to sample across the entire 3-8” face of the shovel cut to achieve the same effect. Mix the sample well and place in a zip-lock bag to avoid drying.
 - d. Sampling too early or too late in the growing season, or sampling excessively dry soil can produce poor nematode test results. Avoid sampling in dead areas.
4. Label each composite sample as follows:
 - a. Grower name, Field name or number, Section sampled, Date Sampled, Crop sampled.
 - b. Indicate on the bag what tests you would like to run. (*Verticillium* only, Nematode only, Root nematodes, Early Dying, SCN egg).
5. Store the samples below 50 degrees F until submitted for testing. Ship using next day air if possible and pack in an insulated box to avoid freezing or temperatures in excess of 80 degrees F.
6. Mail or Deliver to: Pest Pros 10086 1st Street, Plainfield, WI 54966