USDA
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Natural Resources Conservation Service

Taking a Good Tile Water Nitrate Sample

The 360 Soil Scan tool can be used to test for nitrate in tile water. The following information is a guide for people interested in testing their own tile water for educational purposes. It is only a guide, and should not be considered the only way to perform a sampling operation.

Choosing When to Take Samples

To best ensure that drainage water tests provide accurate results, a regular sampling schedule should be undertaken, such as bi-weekly or monthly, depending on the commitment level of the sampler and when tile drains are running.

If such frequent sampling is not feasible, collect samples at least once or twice annually. It is also important to check the quality of tile effluent soon after a nutrient application or heavy rainfalls. This will ensure that any significant changes in the tile water stemming from the application of nutrients will be noticed, and appropriate protective measures can still be taken.

Samples for Chemical Properties

- For any nutrient samples, use plastic or glass containers with a screw lid. One example is a mason jar with a water tight lid.
- If the sample bottle is not new, wash it with detergent that is free of phosphate and ammonia, then rinse it under tap water until suds are no longer present.
- The sample bottle should be large enough to hold 8 ozs. of sample water.

Collecting and Storing Chemical Samples

- Collect the sample directly into the sample container.
- The sample container should be rinsed once or twice with water from the site being sampled.
- Fill the container to within 1 cm of the top.

Handling Before Test for NO_3-N

Once the sample has been properly collected, take it in for testing. Generally, the sooner the testing takes place, the more accurate the results. If you are not able to deliver the sample right away, store it at 34-36° F. The sample may be stored up to 48 hours at this temperature before it is tested.

Analyzing Results: *The 360 Soil Scan Nitrate Test will analyze the amount of nitrate ions present in your tile water. The amount of NO_3-N in tile water may depend on the time of year, crops that are growing, amount of rainfall, and tile flow. For information about interpreting the results, see Purdue Extension Agronomy Guide AY-318-W "Interpreting Nitrate Concentration in Tile Drainage Water" or your local Extension Office.*