

# Tobacco Transplant Producers: Time to test your float bed water

*Kristin Hicks, Ph.D. NCDA&CS Agronomic Division Plant/Waste/Solution/Media Section Chief*

Successful production of tobacco transplants starts with good water quality and with getting the right nutrient levels in the float solution. Growers preparing for transplant production should begin by having their *source water* tested. In North Carolina, the most common water quality problems for float bed source water are alkalinity, pH, sodium and chloride. By getting the source water tested, growers can address any of these issues early on and *before* they impact transplant quality.

After fertilizers have been mixed in to the bays, growers should send in a sample of their *nutrient solution* to verify that the target nutrient concentrations have been achieved. Testing of source water and nutrient solutions is available as a *solution analysis* through the Agronomic Division of the N.C. Department of Agriculture and Consumer Services.

The test measures total alkalinity, pH, electrical conductivity (soluble salts) and concentration of 12 essential plant nutrients including nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, manganese, zinc, copper, boron, and chloride plus sodium. The NCDA&CS *Solution Analysis Report* provides this information as well as nutrient management recommendations by an agronomist.

## Collecting & Submitting Nutrient Solution Samples

To collect a sample, use a clean, plastic bottle such as a 16 oz soda or water bottle. Before filling the bottle, rinse it with the water being collected.

- *Source water*—before sampling, run water 5 to 10 minutes and collect sample from the tap or emitter. Use the code for source water, which is **ST**.

### Solution Source Water

SP	Pesticide Solution
SH	Hydroponic-Nutrient
SE	Floriculture Production
<b>ST</b>	Tobacco Transplant Production
SV	Vegetable Transplant Production



- *Nutrient solutions*— Make sure that the fertilizer has been thoroughly mixed and is completely dissolved. Collect the sample from the emitter NOT the stock tank. Use the code for nutrient solutions, which is **NT**. **Please specify if you are using an organic nutrient solution.**

### Nutrient Solution

NS	General (indicate target conc. in comments)
<b>NT</b>	Tobacco
NL	Pour-thru Leachate
NO	Other *

Label each sample with a sample ID and fill out the *Solution Analysis Information* form. These forms are available from the Agronomic Division office in Raleigh, regional agronomists, county extension centers and agribusiness outlets. They also are available on the Agronomic Division Web site at <http://www.ncagr.gov/agronomi/pdf/issoln.pdf>

**Turnaround time:** 3-4 days from receipt

**Cost:** \$5 for NC residents or \$25 for samples from outside of North Carolina.

**Send samples to:**

NCDA&CS Agronomic Services Solutions Section

*Mailing address (USPS):*

1040 Mail Service Center, Raleigh, NC 27699

*Physical address (UPS, FedEx):*

4300 Reedy Creek Rd, Raleigh NC 27607

If you have questions about how to collect samples or interpret your report, contact the Agronomic Division at 919-733-2655. Your NCDA&CS regional agronomist or county extension agent can provide additional assistance.