

## Soilless Media Analysis: Is This Test for You?

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The NCDA&CS Agronomic Division offers many services that help strawberry growers produce optimum yields and quality berries. These services include plant tissue analysis, soil testing and irrigation water testing (solution analysis). A newer, lesser-known test is *soilless media analysis*, which can be beneficial to anyone who uses soilless media in the production of strawberry plugs.

Soilless media are the lightweight substrates that are most typically used in containerized production of bedding plants and greenhouse and nursery crops. Common components include compost, peat moss, perlite, pine bark, sand, and/or vermiculite. Unlike mineral soils, soilless substrates have little capacity to supply or retain nutrients or to buffer pH. Consequently, container nutrient concentrations, pH and soluble salts may change quickly. Due to these dynamics, having soilless media tested on a regular basis can prevent problems associated with undesirable quality and facilitate the fine-tuning of fertilization programs.



**Careful sampling gives the best results.**

Soilless media analysis is conducted by the Agronomic Division's Plant/Waste/Solution/Media laboratory, using the saturated media extract (SME) procedure. SME is preferred over traditional soil testing for the analysis of soilless substrates. It measures electrical conductivity (EC), also called soluble salts; nitrate-nitrogen (NO<sub>3</sub>-N); ammonium-nitrogen (NH<sub>4</sub>-N); urea; phosphorus (P); potassium (K); calcium (Ca); magnesium (Mg); sulfur (S); sodium (Na); chloride (Cl-) and pH.

*Consistency in sampling procedure and timing produces meaningful test results that are comparable over time.* Media analysis of

bulk substrates prior to potting is beneficial to screen for potential problems such as low pH and high soluble salts and also to monitor uniformity of the potting supply. Diagnostic sampling involves the collection of multiple samples for comparison. *When trying to diagnose a suspected nutrient problem, collect separate media samples from "good" and "bad" areas.*

To learn more about this service, see *Sampling for Soilless Media Analysis* and *Understanding the Soilless Media Report* both at [www.ncagr.gov/agronomi/uyr-media.htm](http://www.ncagr.gov/agronomi/uyr-media.htm). You can also contact Brenda R. Cleveland, PWSM Section Chief, at [brenda.cleveland@ncagr.gov](mailto:brenda.cleveland@ncagr.gov) for further guidance. ❖



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