Agricultural & Environmental Services Laboratories (AESL) | 9-25-15 | Vol. 1, Issue 1

This Issue:

As we start sharing laboratory updates with the Extension family and the general public through this newsletter, we thought that it would be the perfect time to present the history of the soil lab and provide an overview of our organization and services offered.

Topics Covered:

- Soil testing through the years
- Soil, Plant, & Water Lab (Soil Lab)
- Feed & Environmental Water Lab (Feed Lab)
- Crop & Environmental Quality Lab (CEQL)
- Consortium for Internet Imaging & Database Systems (CIIDS)

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2015 International Year of Soils

Soil testing through the years

Mobile lab, architect's drawing of the new lab, and new computer system for soil lab. Director Isaac and Agronomist Plank inspecting data. Photo sources: Soil Lab archives and (http://www.griffin.uga.edu/index.php/campus/about)

Soil testing is the oldest of the Extension laboratories, and began in 1951 as a mobile laboratory on wheels; however, it was discontinued in 1955 as a novel but impractical innovation. At about this same time soil testing labs were established at the Athens, Griffin, and Tifton campuses.

Proving difficult to coordinate and support three laboratories at distant locations, soil testing was consolidated to Athens in the mid-1960s, at which point the Cooperative Extension assumed administration responsibilities over the lab.

During the late 1960s the lab continued to grow, and more space was soon needed. In 1970, the construction was completed of an 8,000 square foot building, which is current home of the soil testing lab.

Soil testing grew steadily during the 1970s and 80s with annual sample numbers reaching the 150,000 level. During this time frame the soil test recommendations were incorporated into the University's mainframe computer, which provided the County Agents with printed recommendations and the capability of accessing the sample results directly from the laboratory.

Also in the late 70s, the introduction of the inductively coupled plasma (ICP) emission spectrophotometer into the routine operations of the laboratory revolutionized the soil testing program. The ICP provided rapid, simultaneous analysis of multiple elements, and as a result turn-around time was reduced to two to three days.

Routine soil tests remained free until 1991 when budget cuts forced the initiation of a $4.00 per sample charge to recoup some expenses. State funding was restored in FY 1995-2003 hence, soil testing was free again. In FY 2004, state funding was reduced, prompting the lab to impose a $2-fee on commercial routine (farmers) and $4 on non-commercial (gardeners) soils. Further budget cut the following year compelled the lab to increase the fee to $6 for all routine soil samples, which is the prevailing rate at the present time.

Staff of the Soil, Plant & Water Lab.
Photo by Merritt Melancon.

Soil, Plant, & Water Lab (Soil Lab)

The Soil, Plant, & Water lab offers analysis to help clients determine:

- Soil fertility, pH, lime buffering capacity
- Soil texture, organic matter, soluble salt content, etc.
- Plant mineral, nitrogen, and carbon concentration
- Water suitability for drinking, irrigation, ponds, etc.
- Content of animal waste, biosolids, etc.
- Trace metal content (arsenic, lead, mercury, chromium, etc.)

Soil Lab assists with results interpretation and recommendations

Staff of the Feed & Environmental Water Lab.
Photo by Merritt Melancon.

Feed & Environmental Water Lab (Feed)

Analyses:

- Feeds & forages for the forage producers, livestock entrepreneurs, and researchers.
- Drinking water microbiology for an estimated 648,000 private well owners, small public water suppliers, and real-estate industries.
- Safety of recreational waters, irrigation waters, and the waters used in the fresh fruits and vegetables washing and packing facilities.
- Waters for GA-EPD's water quality monitoring projects of for numerous natural water bodies.
- Wastewaters for NPDES permittees and wastewater treatment plant operators.

Staff of the Crop & Environmental Quality Lab
Photo by Merritt Melancon.

Crop & Environmental Quality Lab (CEQL)

The Crop & Environmental Quality Lab (CEQL) conducts a variety of analyses from pesticides & herbicide quantification in drinking water, soils, or plant tissues, to the analysis of flavor compounds in specialty crops produced in Georgia.

Analyses:

- Pesticides & Herbicides
- Hazardous Waste
- Oil quality determination of edible oils (Olive, Canola, Peanut, etc.)
- Flavor & Health Compounds in Fruits and Vegetables

Staff of CIIDS - Sherri McElroy Clark, Henry WilliamS. Henon Chesser. Photo by Joshua Bell

Consortium for Internet Imaging & Database Systems (CIIDS)

CIIDS provides expert design and development, enterprise level infrastructure, and ongoing customer-centric support for web-based database applications including:

- Distance Diagnostics through Digital Imaging (DDDI) for diagnosis communication, an management of digital and physical agronomic samples
- Accident Reporting System for tracking injuries, expenses, outcomes and training needs related to accidents and incidents in the workplace
- Online grant application, review, and award notification systems

Staff of the AESL support sections – IT, Accounting & Administrative. Photo by Merritt Melancon.

Contact us

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