Agronomic Division — 1998 Annual Report
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The Agronomic Division comprises four sections—field services, nematode assay, plant/waste /solution analysis, and soil testing. Each of these sections has service, education and research functions.

SERVICE

Agronomic specialists in each section of the division provide advice and recommendations, primarily with regard to crop fertilization and nematode management. Within the field services section, regional agronomists stationed throughout the state are available to provide on-site visits to growers; to troubleshoot crop growth problems; and give advice on sampling, interpreting reports, and implementing recommendations.

In fiscal year 1997-98, division laboratories processed more than 357,000 soil, nematode, plant tissue, waste and solution samples—a 10 percent increase over last year. To handle the ever-increasing workload, the legislature approved funding to increase permanent and temporary laboratory staffing. A new Chemistry Technician III position and two new Medical Laboratory Assistant positions have been created and are being filled. Additional temporary personnel have been hired to help process the heavy end-of-the-year workload.

The plant/waste/solution laboratory upgraded its equipment to enable specialists to refine their nitrogen recommendations, particularly with regard to waste samples. The new autoanalyzer separates and identifies NH_4, NO_3, and urea forms of nitrogen. Chemists no longer have to conduct separate and lengthy analyses to obtain this information.

Waste analysis workloads have increased 333 percent since 1995-96 partly because more stringent environmental regulations are now in place. These regulations not only affect what growers do, they affect how samples must be tested. In 1998, there was a significant increase in samples analyzed for copper and zinc on farmland where animal waste was to be applied, as mandated by the legislature (Senate Bill 1217). To meet requirements of new regulations, both the waste analysis and soil testing laboratories had to apply for certification by the North Carolina Department of Environment and Natural Resources' Division of Water Quality (DENR-DWQ). By April 1998, both labs were qualified to provide testing for animal waste permit compliance purposes.

Environmental regulations with respect to waste have also increased workloads for the division' s regional agronomists. Regional agronomists are an invaluable resource for all North Carolina growers, but especially for animal producers who must draft waste management plans, follow guidelines, and steward the environment. In 1997, there were only eight regional agronomists to serve all 100 state counties. Five additional agronomists came on board in February 1998 bringing the total to thirteen. By the end of 1998, money had been approved for a 14th position. The new regional agronomist will serve eight western counties: Cleveland, Gaston, Henderson, Lincoln, McDowell, Polk, Rutherford and Transylvania.

EDUCATION

Agronomic division specialists and regional agronomists continue to educate growers and agribusinesses by being available to provide advice and to interpret report recommendations. In 1998, agronomic specialists consulted individually with more than 16,400 producers statewide. An even larger audience was reached through at least 300 presentations made via farm shows, conferences, TV, radio, the internet, and printed media.

The division also conducts tours of its laboratory facilities. University students, growers, agribusiness personnel, and other interested groups benefit from these informative sessions. At least 113 out-of-state visitors took part in the 146 tours conducted in 1998. In addition to actual on-site lab tours, the division now offers an online virtual tour [www.agr.state.nc/agronomi] that covers the step-by-step processes of each laboratory as well as the field services program.

During 1998, the division continued its commitment to assist other state agencies in conducting a state-wide series of animal-waste-management certification programs. The division also collaborated with DENR-DWQ to provide operator training for waste water systems and biosolid management. Such training is part of the state' s efforts to clean up our rivers and more aggressively steward the environment.

RESEARCH

Division agronomists and nematologists often conduct collaborative research with university personnel. Regional agronomists are instrumental in acquiring permission to set up demonstration projects throughout the state. In 1998, 136 research/demonstration projects were undertaken. These projects are diverse and have included topics such as the effects of deep tillage on soil characteristics, of swine manure on soybean cyst nematode populations, of no-till cropping on nutrient stratification in the soil, use of GPS in nematode sampling strategies, peanut yield response to calcium, and establishment of critical-toxic-level (CTL) guidelines for copper and zinc.