

# PSU Establishes New Water Quality Lab

UNIVERSITY PARK (Centre) — Water quality is one of the most pressing issues in today's world, and many graduates from Penn State's College of Agriculture will pursue this area in their careers. To help students get hands-on experience in evaluating water quality, the college has established a new laboratory.

The Fritz Water Quality Laboratory was officially dedicated on Nov. 27. Located in the agricultural engineering building on the University Park Campus, the lab is named after Brent Fritz, an environmental resource management student who died in an accident in 1982, shortly before his graduation.

"Brent had been especially interested in water quality," says Herschel Elliott, associate professor of agricultural engineering and coordinator of the Environmental Resource Management (ERM) Program. "His family wanted to give some money to the university in hopes of furthering his interests. They wanted an alternative to establishing a traditional scholarship, so we used their donation to renovate space for a water quality laboratory and named the lab in Brent's memory." Equipment for the laboratory was funded by a grant from the Pennsylvania Department of Education.

"Universities seem to be offering fewer and fewer lab courses because they are so time- and resource-intensive," says Elliott. "But students need that experiential component of learning. They need to get in there and run the tests themselves, not just read about them in a book or hear about them from a professor."

The Fritz Laboratory is primarily

ly for teaching, but it will also be used for graduate student and faculty research projects. Currently a water quality chemistry class meets there. Students conduct various common water quality tests—analyses for pH levels; nitrogen and phosphorus content; dissolved oxygen levels, important for survival of organisms in streams; and water hardness, a factor in home water supplies.

Students have access to state-of-the-art equipment, including an ion chromatography systems that rapidly analyzes samples for anions—negatively charged molecules such as nitrates, sulfates, phosphates and chlorides. A gas chromatograph quantifies organic materials—pesticides, for example. Another system analyzes water samples for metal content.

"A common problem with many university labs is outdated equipment," says Elliott. "Because this lab has modern equipment, we don't have to teach our students one thing and then say, 'When you get a job you'll probably do it a different way.' We can expose our students to many of the conventional tests and instruments they'll encounter in the working world."

The water quality lab is part of the Environmental Resource Management Program, an interdepartmental program involving Penn State's departments of agricultural engineering, agronomy, horticulture, plant pathology, agricultural economics and rural sociology and the school of forest resources. ERM is a four-year major designed for students interested in

an interdisciplinary approach to solving environmental problems. Issues addressed in the program include acid rain, hazardous waste disposal and groundwater pollution.

ERM graduates pursue careers with state and federal agencies. They prepare and evaluate environmental

impact statements, develop plans for multipurpose uses of natural resources and analyze environmental and pollution problems. Many recent graduates are working for environmental consulting firms and toxic waste management firms involved in the Environmental Protection Agency's Superfund objects.

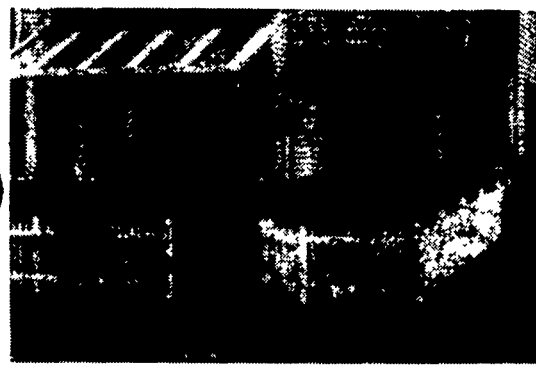


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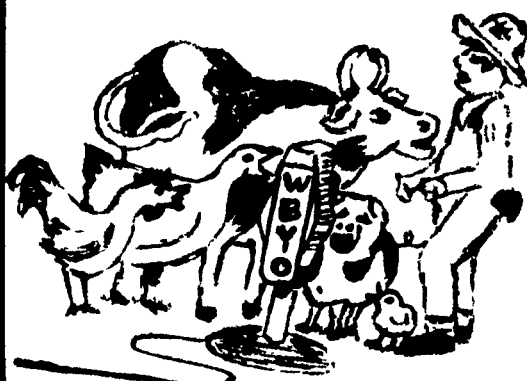
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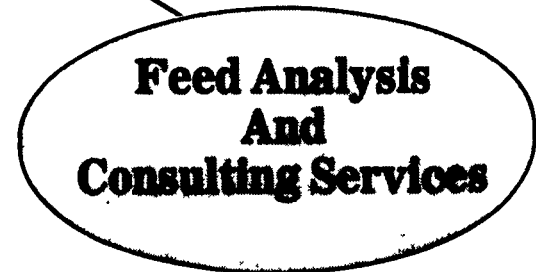
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