

Devoted to Science, Even During Disaster

Two years ago, 6 feet of water inundated one of ARS's major research centers. Stoked by Hurricane Katrina, the rising waters poured in so quickly—and persisted so long—that five employees at the New Orleans-based facility had to be rescued by small boat.

The Southern Regional Research Center (SRRC), one of four regional agricultural utilization research centers operated by ARS, is now well back on the path to recovery. After millions of dollars in repairs and the safe return of its permanent employees, the center is fully operational again.

In its 67th year, SRRC may be best known for taking some of the drudgery out of doing household laundry. In the 1950s, its scientists developed the first durable press fabrics made completely from cotton. The researchers also developed chemical finishes that endowed cotton fabrics with high-tech flame retardancy—a technology since adopted by the National Aeronautics and Space Administration.

And SRRC's first scientists didn't just leave their mark on cotton. They also collaborated with scientists in Florida to create a now-ubiquitous breakfast staple: frozen concentrated orange juice. For the first time, 1950s consumers could enjoy a nutritious, fresh-tasting glass of orange juice without having to squeeze it by hand or settle for the metallic-tasting canned alternatives of the time.

Today, SRRC is still strongly committed to multidisciplinary commodity-use research. Housing chemists, entomologists, food technologists, plant pathologists, and several other scientific specialties under one roof, the center continues to develop new and innovative cotton products. Our scientists are also working to find solutions to dangerous crop-contaminating molds, known as "mycotoxins," and to invasive termites that cause \$1 billion worth of damage each year in the United States alone. SRRC researchers are even trying to make life easier for the world's millions of peanut allergy sufferers by searching for a less allergenic peanut.

But on August 29, 2005, all our research was abruptly interrupted. Hurricane winds plowed through dozens of the facility's windows and sheared off the roof of the building's chemical wing. They also flattened mature evergreens on the 40-acre grounds surrounding the center, opening paths for the encroaching floodwaters, which inflicted the most costly damage.

SRRC's ground-floor level remained under water for 3 weeks, setting the stage for widespread, aggressive mold growth. Laboratories and equipment in those areas were ruined. Experiments were destroyed. Also lost were biological materials such as bacteria and fungi—which require constant refrigeration—as well as termite collections and other live samples.

As you can read in the story beginning on page 4, research that microbiologist Maureen Wright was doing in the field also took a blow. Her plans to conduct a multiyear study on trees treated with a natural termite-killing agent were vanquished when the storm's fierce winds knocked down several of her test subjects.

In all, Hurricane Katrina inflicted \$35 million worth of damage to the center. But that figure doesn't at all convey the personal loss experienced by our staff. One in four SRRC employees lost their homes. Some are still living in temporary quarters.

The most worrisome period for SRRC administrators was accounting for all employees immediately after the storm. A coordinated effort by the center and ARS's Mid South Area Office helped locate all missing staff in a timely manner.

Another immense challenge was finding temporary worksites for more than 170 employees. Dozens of scientists and their support staffs had to relocate—many with lab equipment in tow—to several worksites scattered across 12 states. Efforts were made to match scientists with university collaborators or with colleagues at an ARS laboratory doing compatible research. Even industrial collaborators and other USDA facilities offered space and support for us.

For instance, Edward Mullaney, who's developed an enzyme that can reduce phosphorus pollution associated with swine and poultry production, relocated to Cornell University in Ithaca, New York. There, despite the personal and professional upheaval, his work prospered. In addition to being near his collaborators, Mullaney was afforded access to first-rate molecular-viewing software that was unavailable at his New Orleans laboratory.

Besides Cornell, other universities generously made room for SRRC employees, including Louisiana State University, Texas A&M, University of Texas, University of Arkansas, University of Georgia, and Clemson University, to name only a few. And many ARS laboratories provided significant space and support, which resulted in strengthened collaborations.

The first of our employees returned to SRRC in April 2006. The rest arrived by late July. And while many of their research studies were stalled—or abruptly terminated—because of Katrina, SRRC scientists managed to remain impressively productive. The year after the storm hit, our researchers published more than 450 scientific papers.

Today, thanks to those who helped in so many ways, our center is once again working on research that will benefit U.S. agriculture and the consumers who rely on it.

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