



CORN VARIETY TESTS

Discovery proves important to research

Since the 1930s, researchers have conducted intensive breeding work to improve plant stability and corn yields. Temperature and weather patterns change over time, and along the way breeders have increased their understanding of processes and yields. Since it's not possible to travel back in time, central to current and future research is the ability to evaluate present conditions with those of the past.

Iowa State Professor Pat Schnable and members of his lab are working on a project focused on yield stability and whether it has increased over time. At one point in their information gathering process, his team was trying to locate historical corn yield test data for various states in the U.S., including Iowa, Illinois, Kansas, Wisconsin, Mississippi, and Indiana. Agriculture experiment stations have been conducting yield tests for a long time, with hard copies in many cases preserved in library collections. For a variety of reasons locating some of this particular data proved challenging.

Enter the librarians and staff at the Iowa State University Library to assist Schnable and his researchers, including project leader Lakshmi Attigala. The request was fairly specific: locate corn variety tests for 1973-1992 from Indiana. The science and technology librarian realized the data was published by Purdue University as part of the Agricultural

Experiment Station publications. However, the initial request couldn't be filled due to an issue with logistics at Purdue. The Iowa State library had some of the publications in storage from the Purdue University Agricultural Experiment Station, including annual reports from the necessary year range, which showed variety tests had been co-published in the *Station Bulletin* series along with the correct titles and issue numbers. With new hope for finding the materials, the research team was able to obtain the volumes through interlibrary loan from a different library.

The investigation continues. Through the process, Schnable's team discovered that sometimes it's not easy to find resources. "The people who generated the data don't even have the data," he said. "Libraries are curating the data and the service to help researchers locate it."

Research always begins as an exploration, and scholars don't necessarily know what they'll find or what value it might have to society. Among other things, corn is involved in the production of food and fuel, so this type of research is significant in everyday life. Sometimes the ability or inability to locate information has broad – national, even worldwide – implications. Libraries curate materials, scholarship, data and research outcomes. They are repositories for and the gateway to information.

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-Patrick Schnable,
Iowa State University professor



Pictured above: Lakshmi Attigala, in Parks Library. Attigala is an assistant scientist in the Department of Agronomy. She is leading the data collection project.



Far left and left: Comprised of farmers, the Iowa Corn Research Committee and Iowa Corn staff members on a farm visit in June, during which, staff and graduate students from the laboratories of Drs. Patrick Schnable, Michael Castellano, Liang Dong, and Baskar Ganapathysubramanian offered insight into the research conducted at Iowa State in the field of plant phenomics. The pictures were taken at the Agronomy and Curtiss farms.

Photos courtesy of Eddy Yeh of the Schnable Laboratory, Iowa State University.