Matt Miller/DN

Agronomy professor James Specht peers through test tubes in Keim Hall on Tuesday afternoon. Specht is nationally recognized for his research done in drought tolerance of soybeans.

Fertile mind

Professor yields success in research

By Joshua Gillin
Staff Reporter

Although James Specht spends much of his time amid a barren landscape of test tubes and computer printouts, there is a fertile corner of his mind in which imagination grows.

Specht, a 21-year professor for UNL's agronomy department, has used his imagination to help him win nationwide recognition for research in plant physiology.

His recent research on drought tolerance in soybeans even won him an award for soybean research at the Commodity Classic Soybean and Corn Exposition in Phoenix last month, and he has been named Sigma Xi Outstanding Scientist of 1996.

But Specht is not the straight-laced, nose-in-a-book research scientist one might expect. He is a good-natured and relaxed man who seems as if he would be just as comfortable working in a hot soybean field as he would in an air-conditioned office.

Specht said he was a typical example of a man in his position. He said he balanced his duties as a research scientist and a teacher, and that he loved aspects from both professions.

"I'm both," he said, "and I have-to be. A scientist has to be a teacher so he can explain his discoveries to people.

"If you can't explain them, they aren't worth anything."

Specht, who has been credited by the Nebraska Soybean Board for several improvements in soybean farming, said he wanted to be a scientist since his childhood on a farm near Scottsbluff.

His interest in plant physiology led him to UNL in 1963. After earning a bachelor's degree in agronomy, Specht served in the Vietnam War, putting off his education for almost four years.

Specht earned a master's degree in agronomy at the University of Illinois-Champaign-Urbana in June of 1971, and he returned to receive a doctorate in genetics in 1974.

He said his work with sorghum during his graduate studies clinched his decision to become a researcher of plant physiology.

"When you discover something, you get this 'eureka' feeling, like 'this is it — I've done it,'" he said. "That feeling is what attracted me to research."

Specht said he believed research was the key to progress in the modern world.

"Research turns into discoveries," he said. "Discoveries turn into ideas, and those ideas turn into advancements. Those advancements are called technology."

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>
> **JAMES SPECHT**
> UNL agronomy professor

Specht said he was a strong advocate of technological advances. He said improvements in the way in which data was collected, organized and analyzed today were because of better technology and research methods.

His own research and discoveries were a direct result of recent advances in data-gathering techniques, as well as scientific discoveries, but he keeps things in perspective.

Discoveries and improvements in methods and technology excited him as much as everyone else in the scientific community, he said. But Specht said he tried to keep a "long view" in mind.

Most advancements in technology are incremental, he said, and scientists needed to keep that in mind.

"It's not like computers jumped from being these huge machines that took up a whole floor of a building to desktop PCs over the course of a year," he said.

Taking time to perfect new technology and techniques often gives scientists time to find out things that were unexpected, he said. He said he believed that small problems often were overlooked if advancements were rushed.

"Because of those kinds of situations, maybe those small, incremental advancements are a good thing," he said.

Incremental advancements are nothing new to Specht — his recent soybean physiology experiments have taken more than three years. He said he believed they were worth every moment, however — both in the laboratory and in the field.

Specht's patience and wisdom have been noticed by his colleagues. Don Lee, an assistant professor of agronomy, said the first thing he noticed about Specht was his willingness to help co-workers.

"What impressed me the most about Jim was his openness as a researcher," Lee said. "Scientists sometimes like to guard their secrets, but he's always willing to share his discoveries and ideas."

Lee said Specht's courtesy as a scientist spilled into his teaching career. He said Specht was constantly helping younger researchers and students, trying to get them involved in and excited about their work.

But Lee said what he liked about Specht most of all was that work was never the only thing in his life.

"Jim's not just a research colleague," Lee said. "He's also a friend, someone I like working with."

Ken Cassman, head of UNL's agronomy department, called Specht a resourceful scientist and an excellent teacher.

"His goal is success, and his research is a testament to that," Cassman said.

These praises fall on all but deaf ears, though. For Specht, the discoveries he makes are what really matters.

"If we stop the pursuit of knowledge, I think we're pretty much done for as a race," Specht said. "So much is dependent on technology today, we need advancements in order to survive."

Specht said he thought his work was an essential part of those advancements.

Hours mapping genes and researching plant structure are spent in the hopes that his discoveries will one day have a profound effect on the lives of people around the world.

"The six billion people we're supposed to have on this planet by the year 2000 will all need to have something to eat," he said. "Maybe something I'm working on will one day help with those problems.

"Then again," he said, "it might not."

Specht said he planned to continue teaching and working, and to keep boring his wife with the details of his research, for a long time.

Science is something that captivates and exhilarates him, he said, and is not something he is willing to give up soon.

"I think most scientists, whether they know it or not, do what they do because they know their knowledge will somehow better mankind," he said. "I know that's why I do it."