it is hard to quantify the good things they have done, but this is one way to put it in a physical reminder that hopefully will go on forever.

"I have always thought that we (the kids) are their legacy, and what we do reflects on them, so it is up to us to be the best people that we can be and follow their example. They have always been and will be my role models. Hopefully, this will provide the same opportunity to others."

Daughter Ramona expressed that her parents have done a good job of building a strong, healthy family – which now consists of eight children, 10 grandchildren, and one great-grandchild on the way. "Mom and Dad have given us their love and have lived their values. The lives they have built for all of us have been built on a foundation of faith, commitment to family and community, and a firm belief in the value of education."

Chuck added that he and his siblings hope this scholarship will enable their parents to continue having a positive influence on Defiance College students and their future success for years to come. He said, "We would encourage anyone that would like to distinguish their parents or other major influence in their lives to make this same commitment."

Ray retired from Defiance College in 1995 at which time he was honored with the title of Controller Emeritus. He and Jean continue to reside in their family home on Defiance's east side.

## Raymond and Jean Derricotte Scholarship

If you would like to make a contribution to the Raymond and Jean Derricotte Scholarship, you may do so online at www.defiance. edu or send to Defiance College, Office of Institutional Advancement, at 701 N. Clinton Street, Defiance, OH 43512. Make your check payable to Defiance College and make note of the scholarship on the memo line. Information for creating an endowed scholarship may be obtained by contacting the Office of Institutional Advancement at 419-783-2371.

## **CONTINUING RESEARCH**

## Dr. Mikula's genetic research spans 50 years

Little work has been done to show how genetic systems can respond to environmental conditions with changes that are heritable. A grant from the Kettering Foundation to Defiance College in the early 1960s made it possible for Dr. Bernie Mikula, now professor emeritus, and his students to carry out research under controlled environmental conditions.



The idea that temperature and light can have heritable effects on genetic systems has been ignored and/or considered impossible through most of the 20th century, according to Dr. Mikula. It seems appropriate that this "scientific dogma" be challenged by someone in a school named Defiance! In annual meetings over the past 50 years, he and his students have had the opportunity to spread the word to the universities. Dr. Mikula says they are finally beginning to pay attention. Younger generations of geneticists don't find it quite as difficult to accept the role of environment as having heritable effects on the gene.

The titles of some of Dr. Mikula's work listed on the Internet reflect the direction in which he has directed efforts over the past 50 years. The work presented at this year's Maize Genetics Conference was an amplification of work that DC alumnus Anthony Studer and Dr. Mikula worked on in the 1990s, and that he presented at the International Genetics Conference in Australia in 2003.

The two growth chambers the College was able to purchase back in the 60s are only four feet by eight feet, so Dr. Mikula and his students couldn't grow much corn in them, but they found out that the corn plant only needs to be under controlled conditions

for the first two weeks at 32 degrees or three weeks at 22 degrees. In fact, the temperature is very important even for a period of just two days. The plants receive "instruction" in that early period when they are only about eight inches tall. Two months later when the plants are harvested from the field, it is found that they "remember" the conditions in the two- or three-weekold period. The controlled conditions in the growth chambers have left a memory that is "remembered" two months later and also in the next generation. Since the plants are much smaller at this early period, more of them could be treated then moved to the field to mature for a "memory check."

Dr. Mikula attended and gave a poster presentation at the 2009 Maize Genetics Conference held in St. Charles, Ill. Anthony Studer, currently a doctoral student at the University of Wisconsin-Madison, presented a paper at the conference.



Dr. Margaret Noble Mikula and Dr. Bernie Mikula in front of Tenzer Hall.