



Plant Breeding for Food Security: The Global Impact of Plant Genetics in Rice Production

On Thursday May 28th, the Plant Breeding Center, in collaboration with the Confucius Institute, hosted the Plant Breeding for Food Security symposium. The symposium focused on the global impact of plant genetics to rice production in honor of the work of UC Davis Alumnus and Adjunct Professor, Dr. Gurdev Khush. Over 200 guests came from all over the world to attend the day-long symposium to discuss the advances of global production in rice, wheat, and tomato, the future obstacles that face an ever-growing world population, and the technologies that will revolutionize farming and food production.

To give the audience some perspective on the breadth of Dr. Khush's global recognition, Dr. David Lobell, Associate Professor at Stanford University, explained:

“To an American, it's hard to understand just how important rice and rice breeding is to the world. Recently, I was traveling around Eastern India with some younger colleagues from CIMMYT. It was during the cricket world cup, so we spent a lot of time talking about sports. When the topic came to basketball, my colleagues said their favorite player was the tall guy with a bald head, 'Michael something.' They asked me where I live, and I mentioned that I live next to the daughter of Gurdev Khush. I asked if they knew who he was, and they both tilted their heads to say, 'Of course.' 'Everyone knows Dr. Khush,' they agreed. For an American like me, maybe the best way to understand the impact of Gurdev Khush is to know that in many places, he is more of a household name than Michael Jordan.”

Dr. Khush received his Ph.D. from UC Davis in 1960 and became the Head of the Plant Breeding Department at the International Rice Research Institute (IRRI) in the Philippines, where he played a key role in developing over 300 strains of rice. He is lauded as a key leader in the Green Revolution in the 60s in Asia for his development of strains IR36 and IR64, varieties that produced a higher volume of grains per plant and are credited with vastly improving the global supply of rice during a period of extensive population growth. He was honored with the World Food Prize in 1996 for his efforts, the Borlaug Award in 1977, the Japan Prize in 1987, and the Wolf Prize in 2000. He returned to UC Davis as an Adjunct Professor in 2002.



In a panel of his international colleagues and mentees, Dr. Khush addressed the symposium to discuss the challenges he faced during the Green Revolution, and once again expressed his dedication to and deep appreciation for the faculty he learned from, claiming, “UC Davis faculty prepared me for those challenges.” Audience members engaged the highly respected line-up of international and local speakers with questions and suggestions for future research, and to share stories of how Gurdev inspired them in their own work.



Symposium topics also included an overview of the California rice industry, the cultural differences between rice-growing and wheat-growing communities in China, and current collaborations in the African Orphan Crops Consortium. The symposium concluded with a dedication and ribbon cutting ceremony for the Gurdev Khush Conference Room in the Plant Reproductive Biology building. Several members of the Khush family attended, along with many of Dr. Khush's colleagues and fans. UC Davis faculty spoke at the dedication, including Chair of the Plant Sciences Department, Chris van Kessel, Drs. Kent Bradford and Alan Bennett, and Gurdev Khush himself.

-Amanda Pietras

Plant Breeding for Food Security:
The Global Impact of Plant Genetics in Rice Production
A symposium honoring Dr. Gurdev Khush

May 28, 2015
Conference Center
University of California, Davis

- 8:30 AM Welcome to the Khush Symposium (Alan Bennett)
- 8:40 AM The Plant Breeding Center (Charles Brummer)
- 8:50 AM The Confucius Institute (Glenn Young)
- 9:00 AM Global food production – challenges and opportunities (Ken Cassman)
- 9:45 AM Food production, technology and climate (David Lobell)
- 10:30 AM Break
- 11:00 AM Panel – Impact of Gurdev Khush on plant genetics and food security
Tomato genetics (Dani Zamir)
Rice genetics (Pam Ronald)
Green revolution (Gary Toenniessen)
A personal view (Gurdev Khush)
- 12:30 PM Lunch; The California Rice Industry (Kent McKenzie)
- 1:30 PM The rice theory of culture (Thomas Talhelm)
- 2:00 PM Recent advances in rice productivity and the future (David MacKill)
- 2:30 PM Hybrid rice technology contributions to global food security (Sant Virmani)
- 3:00 PM Super green rice (Qifa Zhang)
- 3:30 PM Break
- 3:45 PM Tackling the wheat yield barrier (Matthew Reynolds)
- 4:15 PM African Orphan Crops – inspiration and execution (Howard Shapiro/Allen Van Deynze)
- 4:45 Conference adjourns
- 5:30PM Guests are invited to enjoy hors d'oeuvres and beverages at the dedication ceremony of the Gurdev Khush Conference room
Location:
Plant Reproductive Biology Center
Extension Center Drive
University of California, Davis
Davis, CA 95616

