



36th Convocation

Monday, 17th August 2015

Tamil Nadu Agricultural University
Coimbatore



Convocation Address

Dr. SUSAN R. McCOUCH

Professor, Department of Plant Breeding and Genetics,
Cornell University, USA

**TAMIL NADU AGRICULTURAL UNIVERSITY
COIMBATORE**

36th CONVOCATION

CONVOCATION ADDRESS

Dr. Susan Rutherford McCouch

Professor

**Department of Plant Breeding & Genetics
Cornell University, Ithaca, New York, USA**

His Excellency, Hon'ble Chancellor and Governor of Tamil Nadu, **Dr. K. Rosaiah**, Hon'ble Pro Chancellor and Minister for Housing, Urban Development and Agriculture, Government of Tamil Nadu, **Thiru. R. Vaithilingam**, Distinguished academician and Vice Chancellor of TNAU, **Dr. K. Ramasamy**, Dr. Pedro Medrano Rojas, Shri. Ashok Bakthavathsalam, Members of the Board of Management, Members of Academic, Research and Extension Education Councils, Graduates of the year, Faculty Members, representatives of the mass media, dear student scholars, Ladies and Gentlemen.

It is indeed a privilege and honour to be invited to deliver the 36th convocation address of this prestigious Tamil Nadu Agricultural University, Coimbatore. I most sincerely thank the Hon'ble Chancellor and

Vice Chancellor for providing me this opportunity to share my thoughts with all of you. On this memorable occasion, I congratulate the graduating students for your many and varied achievements and wish you all possible success as you go forward to make your marks in the world.

I want to first acknowledge the long and distinguished history of your great nation of India, its rich and varied agricultural landscape, its premier university system, and the talent, commitment, intellectual potential, energy and enthusiasm of the students gathered here today. You, the 2015 graduates of TNAU, have been educated at one of the world's top agricultural universities, and you must surely feel the weight of expectations on your shoulders. It falls to you, collectively, to help improve the productivity, sustainability and resilience of the agricultural system in your own state of Tamil Nadu, in India as a whole, and by extension, in the world at large. This is a tall order and a journey that we share.

As we bask in the warmth and good wishes of family, friends, teachers and colleagues, I will take a few minutes to consider the personal journey that awaits each of you, and to share stories from my own life that have led me to this moment here speaking to you today.

Looking back at the person I was at 18 when I initiated my university studies, I see a young woman who

had a great desire to experience the world beyond her own borders, a young woman who wanted to get to know people from different walks of life, with different aspirations, from diverse social, cultural and religious traditions, and to find common ground among the differences. I had no idea where my education would take me, but I trusted that the pursuit of knowledge and discipline of the mind had its own trajectory and rewards.

As an undergraduate, I chose to study Hispanic language and history. At that time, I believed that learning another language was just a problem of vocabulary, learning to use different words to say the same thing. What I discovered was that learning a new language involved seeing the world through entirely different eyes. Learning to communicate in a new language involved acquiring a new understanding of history, a new understanding of relationships, and projecting future aspirations in a new light. I found the same was true as a graduate student, when I learned to speak the language of biology - but more of that later.

Following graduation, I undertook a 21,000 km overland journey from Boston to Buenos Aires, Argentina. In a metaphorical sense, many of you will undertake similar journeys. I traversed the entire length of the Americas over the course of a year, communicating only in Spanish, with no internet and no mobile phone. I was indebted to

the kindness of strangers. I learned a great deal about the Spanish language and the history and culture of distinctive Spanish-speaking people.

During that trip, I learned even more about humanity, about wealth and poverty, about urban and rural living, about food and agriculture, about generosity, and about the importance of giving and receiving. In short, I understood that empowerment comes from sharing what you have with others.

And that is such an important lesson that if you take only one message from my speech today, I hope it is that one: **empowerment comes from sharing what you have with others.**

I also learned that most disease is associated with poverty, a result of poor nutrition, poor sanitation, and lack of education. I learned that access to healthy food and clean water is more important to global health and prosperity than the vast majority of expensive medical and pharmaceutical interventions. I learned that generosity, both material and spiritual, enriches all concerned.

I returned to the US and entered a graduate program at the University of Massachusetts in Agriculture and Life Sciences. I started with all the basic courses in Biology, Chemistry, Physics, Botany and Genetics, entry-level classes that any undergraduate would already have

completed. Those classes invigorated and excited me, and awakened memories of my previous academic voyage into the world of language and literature. I was thrilled to learn the language of biology, a new vocabulary with an entirely different kind of literature behind it, one that promised to open new doors and allowed me to communicate with a different group of people about many different things. As time went on, I realized that once again, this new language coloured my world, gave me a new appreciation of history (now called evolution), a new understanding of relationships. Once again, I found myself seeing the world and my aspirations in a new light.

After I earned an M.S. in Plant Pathology and before I could get a foothold in my new career, my life took an unexpected turn. I met the man that I would marry. Like me, he had lived overseas, and his experience motivated him to pursue graduate studies in Veterinary Medicine at Cornell University. The move to Ithaca, NY determined the future course of both our careers. During his four years in vet school, I worked as a technician and we started a family, which was a very happy road for us both. Once my husband graduated and started working as a veterinarian, I decided to pursue a PhD in Plant Breeding and Genetics. Together we agreed to balance work and family equally. In those early days, it was a great adventure to be juggling child care, graduate studies, and the on-call schedule of a large-animal veterinarian.

The opportunity to pursue a PhD at Cornell offered me an extraordinary opportunity for personal and professional growth, and was one of the most exciting and rewarding periods in my life. My studies revolved around developing the first molecular genetic map of rice, funded by the Rockefeller Foundation's International Program on Rice Biotechnology, a far-sighted and well-organized research network. That program trained an entire generation of rice scientists from all over the world, including many Indian professors and research scholars, some of the most prominent rice researchers in the world today. Molecular biology and genome mapping were in their infancy, and the new "green genetics" technology showed real promise for reducing the use of toxic pesticides, boosting yield, improving water and nutrient use efficiency, enhancing the nutritional content of staple grains, and improving the overall rate of genetic gain in breeding.

I was exhilarated by all that I was learning, by the promise of genomics to unravel the mysteries of quantitative genetics, excited by the people I was associated with, and by the sheer luck of finding myself within a network of people who embraced the ideal of "rice science without borders". I saw my road open up before me, and it has taken many twists and turns as I continue to follow it to this day, through the rice paddies of the world — including India's. I learned a great deal from rice farmers and rice breeders and fellow rice scientists, and I dreamed that

one day I, too, would be able to develop a rice research program, with a focus on genome mapping and genomic-assisted breeding.

I knew that any future lab I would have would embrace the diversity of people and intellectual traditions, would celebrate distinctive rice cultures, and foster sharing of information in an open learning environment. It would also demand rigor and discipline as the foundation for innovation and creativity. I had no idea how all this would come about, but I believed that if I followed the road I was on with sincerity, humility, and an open heart, it would lead me where I needed to go. And that is how I came to be standing before you today.

As my PhD program at Cornell came to an end, I was offered a position as an Associate Geneticist in the Department of Plant Breeding, Genetics and Biochemistry at the International Rice Research Institute, or IRRI, in the Philippines. My husband and I moved to the Philippines just after our second child, a son, was born.

Moving to IRRI was an important step in my career, and it was generous of my husband to accompany me, as his work situation in the Philippines was very difficult. While there, I was able to establish the first genome mapping lab at the institute, train a team of young scientists and technicians, and launch several graduate student careers

in collaboration with the University of the Philippines in Los Baños. Many of my early students are today well-known researchers and research leaders, several are your professors and research mentors here in India.

Our collective work initiated the genome mapping lab and marker-assisted breeding program that laid the groundwork for IRRI's molecular breeding program. Early QTL mapping and more recent genome wide association studies identified scores of genes and QTLs underlying traits that are critical to crop performance and provide valuable targets for selection in breeding.

I left IRRI in 1995 to take a position as a plant breeder and geneticist at Cornell. In my role as professor and research mentor, my greatest joy and sense of accomplishment has come from my interactions with students and young scientists like the ones who sit here today. I have shared in the educational experience of many exceptionally talented and visionary young geneticists and plant breeders. One of my favorite students of all time is sitting here in this audience today. Many years ago, he and his wife completed their studies at TNAU and came to IRRI with their young daughter. He arrived with support from the Rockefeller Foundation to pursue a PhD in rice genetics and breeding, and she came with hopes for a similar opportunity in her field. It took time, but ultimately, the road opened up and both were able to complete their

PhDs and return to TNAU where they have contributed to the teaching and research excellence of this university. Our lives have been enriched for the last 25 years through visits and the sharing of experiences, both our struggles and our satisfactions.

In each case, I have encouraged my students to reach for the sky, to realize his or her own potential, to dream his or her own dreams. I encourage all of you to do the same. I have learned from each student. You extend my knowledge of the world and help me fulfill the great desire I had when I was a young student to swim in the ocean of life, to experience the world beyond my own borders, to know people from different walks of life, from diverse social, cultural and religious traditions, and to find common ground amidst the differences.

The educational process requires a generosity of spirit on the part of both teachers and students. Both of us must agree to participate in a process of mutual sharing that is designed to empower all concerned. By engaging in the educational process, we are transformed and enriched in ways that pay dividends for the rest of our lives. Generosity, both material and spiritual, enriches all concerned.

The educational process continues to underwrite my life's dreams and has brought me to speak to you today.

I share the journey of my life with you to encourage you all to open your hearts and minds to the journey that lies ahead for each of you.

Follow your convictions, with ingenuity and audacity. Address the challenges of the world in front of you. Potential is interesting, but it is through performance and achievements that legacies are built and remembered. Join together and with those who have gone before you to improve the lives of the billions of people who struggle to feed themselves, their families and their nations. Share what you have to empower others. Help make the world a better, safer and more secure place.

Thank you for your kind attention.



Tamil Nadu Agricultural University

Coimbatore

Printed at : TNAU Offset Press, Cbe-3.