Silvano Ocheya was invited recently as a Next Generation Delegate to The Chicago Council on Global Affairs to participate in their 2014 symposium entitled “Advancing Global Food Security in the Face of Weather Volatility and Climate Change.” Silvano is a Ph.D. plant breeding student in Soil and Crop Sciences and holder of a Monsanto Beachell-Borlaug International Scholarship. His committee chair is Dr. Shuyu Liu at the Amarillo Research and Extension Center and his co-chair is Dr. Amir Ibrahim at College Station. Silvano’s research is entitled “Identification of SNP Markers for Drought Tolerance and Developing Drought Tolerant Spring Wheat Germplasm Using Marker Assisted Breeding. He has completed two years of study and dissertation research and has presented data at the TriSocieties annual meeting in Tampa in 2013 and at the Norman Borlaug centenary celebration in Obregon, Mexico in March of this year. Below are a video and Silvano’s comments about the Chicago Council on Global Affairs experience.
“I was privileged and honored to represent Texas A&M University as a next generation delegate at this year’s symposium at The Chicago Council on Global Affairs held from 22 to 23 May, 2014. The theme of the symposium was “Advancing Global Food Security in the Face of Weather Volatility and Climate Change.” The Chicago Council on Global Affairs is an independent, nonpartisan organization that educates the public and influences the public discourse on global issues by providing a forum for world leaders, policy makers and other experts to discuss issues and provide insights into areas covering global agriculture, global economy, global energy, global cities, global security and global immigration.

The Global Food Security Symposium 2014 was a unique opportunity for me and it has given me a more global outlook on food systems in the face of climate change and upsurge in population growth. Our discussions centered on food and nutritional security and it was largely agreed that climate change poses a threat to agricultural productivity and is likely to disrupt global food supply. This is likely to be complicated by increasing population growth (nine billion people in the next few decades) which will further put pressure on already limited resources. Strong scientific evidence from different parts of the world already has shown some of the consequences of climate change. More varied and extreme weather events due to anthropogenic influences have been witnessed across the globe leading to significant loss of property and life as well as a domino effect that subsequently increases food prices. Further, there was consensus that food and nutritional security goes beyond the boundaries of food and affects the health status of individuals, especially children and women in developing countries, and poses a risk for national and international security. The role of plant breeding was primary to the agenda and its importance in developing resilient and nutritionally enhanced crops was underscored with special attention to lower-income countries, particularly low-and medium-scale farmers where the impacts are likely to be pronounced. Water being a big challenge for agricultural production, plant breeding is vital in development of crops that use water efficiently. Further, with global warming, there was emphasis on the need to develop crops that minimize greenhouse gas emission primarily through minimizing usage of fertilizers without impacting yield and quality of the produce. However, to fully tackle the complexity
surrounding climate change and the projected demographic changes, agricultural development requires a broad spectrum of expertise, including policy, research and delivery of service and products as well monitoring and evaluation.

The focus of discussions by the next generation delegates (students from across the world) was food and nutritional security and tailoring research to avert widespread hunger and malnutrition. Thus, as the next generation of hunger fighters, we have a challenge of improving the standard of living and quality of life available to approximately nine billion people in the next few decades through sustainable and improved agricultural productivity using existing resources. Given this enormous challenges, we have to transform the way we do agricultural research to maximize the gains and bring on board all stakeholders to ensure that the farmer gets a complete package of technologies. Despite the challenges, I believe we have the means and the capacity to end hunger and extreme poverty by boosting agricultural productivity through leveraging scientific breakthroughs in research and technology. Thus the take home message was that we can prevent hunger, malnutrition and food-related humanitarian crises. The key research areas documented in the council report include access to information such as weather dynamics, right seeds and appropriate fertilizer, extension services that provide a connection between research and the farmer, access to markets, reduction of post-harvest losses, improvement in information sharing by capitalizing on digital technologies, development of insurance products to manage weather risks, strengthening resilience of infrastructure to climate change, and reduction of food waste. Several key recommendations were put forward which included: make global food security one of the highest priorities of US economic and foreign development policy, bolster research on climate change impacts and solutions, increase funding for data collection, inclusion of climate change adaptation in trade negotiations, advance climate change adaptation, and mitigation through partnerships.

To maximize the time at the symposium, I took this opportunity to network and meet former and current US leaders, potential employers, corporate leaders, CGIAR leaders, students, and other international leaders. Creating such linkages was fundamental for my career in the context of job opportunities as well as future collaborations in research.”
Continuing and Distance Education in Plant Breeding at Texas A&M

Continuing education course modules in plant breeding and genetics, and related disciplines are available from Texas A&M University to clientele interested in gaining new information in plant breeding or simply seeking refresher courses. This program is designed for individuals employed in private industry, CGIAR centers, government agencies, non-government organizations, and other agriculture professionals who need and desire additional knowledge and training in plant breeding but who are not interested in an additional academic degree. A professional certificate can be a part of this program. No campus visit is required. Course modules currently open for enrollment are (https://scsdistance.tamu.edu/purchase/):

Basic Plant Breeding: W. Smith
   Unit 1: Introduction to Plant Breeding (2 June)
   Unit 2: Self Pollinated Crops (2 June)
   Unit 3: Cross Pollinated Crops (2 June)

Other Continuing Education courses in plant breeding and related disciplines that will be available in the Fall 2014 and later include Host Plant Resistance; Selection Theory; Marker Assisted Selection; Genomic Analysis; Field Crop Diseases; Field Insects; Essential Nutrients in Crop Growth; and others. For more information visit https://scsdistance.tamu.edu/ or contact LeAnn Hague, Distance Education Coordinator in Soil and Crop Sciences at leann.hague@tamu.edu or (979)845-6148.

Distance Plant Breeding M.S. and Ph.D. degree programs at Texas A&M. Visit https://scsdistance.tamu.edu/plant-breeding-distance-education/ for details.

Please direct comments concerning this bulletin to Wayne Smith, cwsmith@tamu.edu or 979.845.3450.