

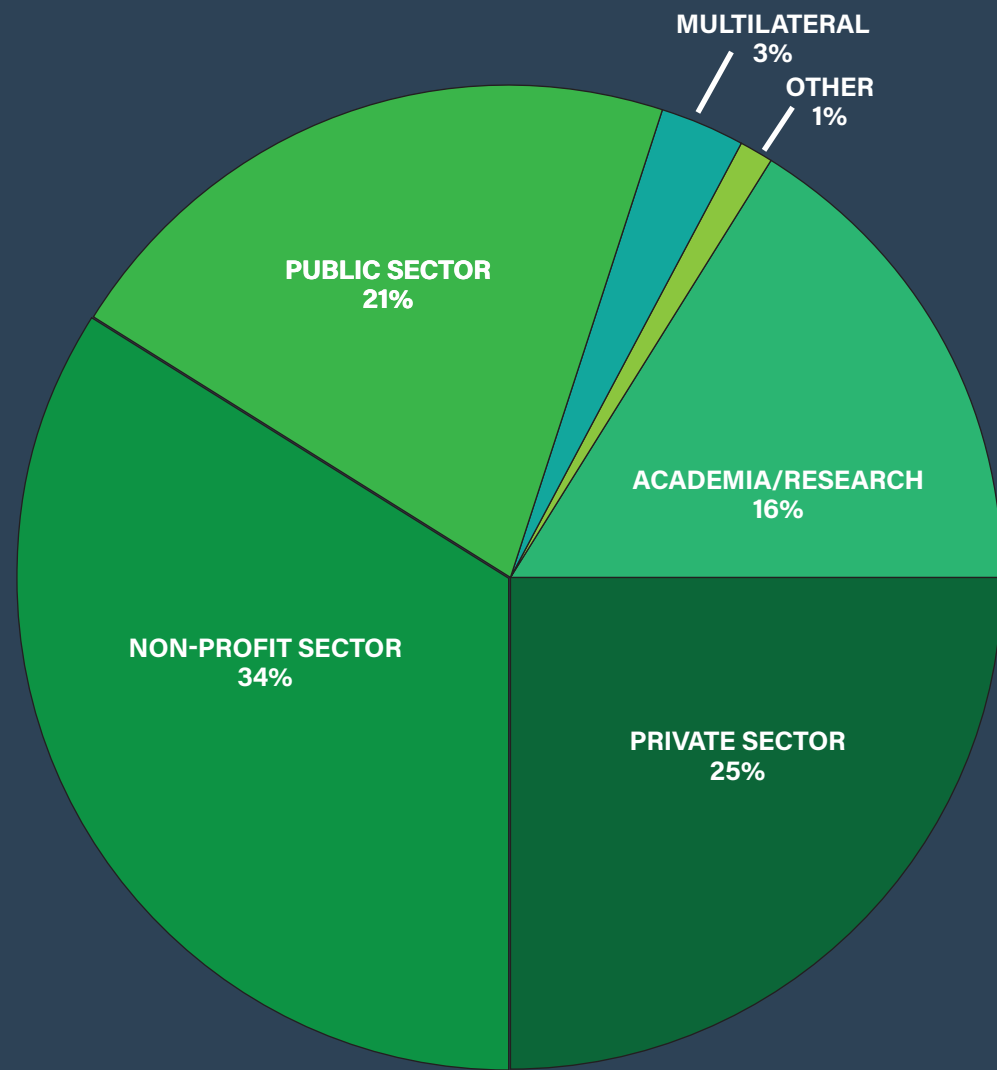


THE WORLD FOOD PRIZE

2019 BORLAUG DIALOGUE INTERNATIONAL SYMPOSIUM REPORT

AN OVERVIEW OF THE HIGHLIGHTS AND KEY OUTCOMES OF THE WORLD FOOD PRIZE FOUNDATION 2019 BORLAUG DIALOGUE INTERNATIONAL SYMPOSIUM





THE SPEAKERS AT THE 2019 BORLAUG DIALOGUE REPRESENTED A DIVERSE ARRAY OF SECTORS IN THE INTERNATIONAL ARENA. THE WORLD FOOD PRIZE FOUNDATION IS COMMITTED TO BEING AN INTERDISCIPLINARY PLATFORM ADVANCING GLOBAL FOOD SECURITY.



“I THINK I WAS BORN TO BE A VEGETABLE SEEDSMAN.”

-SIMON N. GROOT

2019 WORLD FOOD PRIZE LAUREATE



ABOUT THE WORLD FOOD PRIZE FOUNDATION

The World Food Prize Foundation was established in 1986 to be the foremost international award recognizing the achievements of individuals who have advanced human development by improving the quality, quantity, or availability of food in the world. The Foundation has as its goals the following:

- Recognizing and inspiring exceptional breakthrough achievements that increase the supply and availability of nutritious food in the world through the presentation of a \$250,000 prize, often referred to as the “Nobel Prize for food and agriculture”;
- Conducting educational and informational programs addressing important issues in global food security, including by holding the Borlaug Dialogue International Symposium, Iowa Hunger Summit and other programs.
- Providing unique educational opportunities for high school students and teachers to inspire the next generation of youth to pursue education and careers in agriculture and global development;
- Operating the Norman E. Borlaug Hall of Laureates as a public museum, convocation center and educational facility to inform the public about the great achievements of agricultural and humanitarian heroes.



ABOUT THE BORLAUG DIALOGUE

The Norman E. Borlaug International Symposium, known informally as the “Borlaug Dialogue,” each year brings together over 1,200 people from nearly 50 countries to address cutting-edge issues related to the food system. The two-and-a-half day conference convenes a wide array of scientific experts, policy leaders, heads of non-governmental organizations, government representatives, business executives and farmers to build alliances in the fight against global food insecurity.



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EXECUTIVE SUMMARY

The 2019 Borlaug Dialogue International Symposium convened distinguished international leaders, farmers, agribusiness executives, scientists, non-governmental organization representatives and development experts to address critical issues in global food security.

The theme for the 2019 Symposium, “Pax Agricultura: Peace Through Agriculture,” addressed the intersection of food security, conflict and development. With topics ranging from diplomacy, nutrition, climate, scientific innovation and corporate leadership, this year’s Dialogue served as an opportunity to take stock of the current state of global agriculture and food security, particularly as a mechanism for exacerbating conflict or enabling peace.

Panelists emphasized the importance of women and young people in the future of agriculture, and how their wellbeing is dependent upon the industry moving towards more climate-conscious practices. In order to address the climate crisis, practices must shift towards restoring natural resources. An essential component of moving towards sustainable agricultural practices will be developing innovative technologies and ensuring that they are accessible to smallholder farmers around the world. This will require sufficient infrastructure for transportation and the willingness to invest, financially and otherwise, in startups and smallholder farms in rural regions. To effectively implement the necessary changes required to address the climate crisis and confront global food insecurity, stakeholders from across sectors must come together to shift the political and regulatory framework to better support marginalized communities.



KEY THEMES

Through the rich and diverse discussion over the course of the Borlaug Dialogue, the following themes emerged for ongoing work and attention:

- Agriculture's historic role in **promoting peace and stability** in post-conflict regions.
- Sustainable practices and technologies that focus on **regenerative agriculture**.
- Role of the **smallholder farmer and entrepreneur**, and how new technologies can improve yield and quality of life throughout Africa.
- Position of the **private sector** in funding agricultural research and development.
- Importance of infrastructure, such as roads, in **improving access** to markets among rural populations.
- Challenge that **climate change** poses to agriculture and global food security.
- Role that **women and youth** play in agricultural development and sustainability.
- Issue of overproduction and how sustainable practices can lead to a decrease in post-harvest losses, leading to **less food waste** around the world.
- Preparation to feed an **ever-growing population**, and exploration of Africa's key role in doing so.
- Cultivation of **nutritious crops** that benefit both producers and consumers.
- Sustainable **protein sources** such as aquaculture, livestock and soy and how to produce and distribute nutritious and sufficient amounts on a global scale.



CRITICAL QUESTIONS

THROUGH THE COURSE OF DISCUSSIONS,
THE FOLLOWING QUESTIONS REMAINED AT THE FOREFRONT:

HOW DO WE ADDRESS FOOD SECURITY AS THE **GLOBAL POPULATION** CONTINUES TO INCREASE, ESPECIALLY IN AFRICA?

HOW CAN WE ADDRESS NEGATIVE CONNOTATIONS SURROUNDING **GMOS** WHILE RECOGNIZING THEIR VALUE IN ACHIEVING **GLOBAL FOOD SECURITY**?

HOW DO WE CONTINUE TO PROMOTE AND ENSURE **BIODIVERSITY OF CROPS**?

HOW DO WE CULTIVATE A GLOBAL **POLITICAL WILL** TO TAKE ACTION TO ADDRESS CLIMATE CHANGE, INCLUDING RESTORING ECOSYSTEMS AND PRACTICING SUSTAINABLE AGRICULTURE?

HOW CAN THE FOOD SYSTEM **BETTER SUPPORT FARMERS** OF ALL SCALES OF PRODUCTION?

HOW DO WE CREATE OPPORTUNITIES THAT WILL **ENGAGE THE YOUTH** IN AGRICULTURAL RESEARCH AND DEVELOPMENT?

HOW DO WE CONTINUE TO SUPPLY NOT ONLY ENOUGH FOOD, BUT **FOOD THAT IS NUTRITIOUS**?

HOW CAN THE **PRIVATE SECTOR** PROMOTE AND UTILIZE SUSTAINABLE FARMING TECHNIQUES?



ANNOUNCEMENTS

DURING THE WEEK, GLOBAL PARTNERS OFFERED A NUMBER OF MAJOR ANNOUNCEMENTS OF REPORTS, INITIATIVES AND OTHER PLANNED ACTIVITIES, INCLUDING:

LAUNCH OF THE WORLD HUNGER FIGHTERS FOUNDATION

The launch of the World Hunger Fighters Foundation (WHFF) and announcement of the Borlaug-Adesina Fellowship was presented by Dr. Akinwumi Adesina, President of the African Development Bank and Patron of the WHFF; Grace Oluymiai Adesina, President and CEO of the WHFF; and Ada Osakwe, Interim COO of the WHFF, along with the participation of H.E. Felix Tshisekedi, President of the Democratic Republic of the Congo; Olusegun Obasanjo, former president of the Federal Republic of Nigeria; and Ambassador Kenneth Quinn, President of the World Food Prize.

LAUNCH OF THE CGIAR CROPS TO END HUNGER INITIATIVE

CGIAR announced its Crops to End Hunger Initiative to develop and distribute multiple crop varieties to curb the effects that climate change has on production and nutritional needs of both consumers and producers.

RELEASE OF THE 2019 GLOBAL AGRICULTURAL PRODUCTIVITY REPORT

2019 Global Agricultural Productivity (GAP) Report, now housed at Virginia Tech, emphasized the role of the agricultural sector in achieving global goals for nutrition, sustainability, productivity and development in an increasingly populated world.

LAUNCH OF CULTIVO GLOBAL AG INNOVATION PROGRAM

America's Cultivation Corridor announced the launch of Cultivo Global Ag Innovation Program; the program will seek to promote and fund international startups and offer them hands-on experience in a 10-day immersion in Iowa's agricultural startup ecosystem.

LAUNCH OF NEW USAID PARTNERSHIPS WITH JOHN DEERE, MASTERCARD AND CORNELL UNIVERSITY

USAID announced a series of collaboration efforts across various sectors aimed at advancing crop research and providing smallholder farmers access to necessary materials.

New Feed the Future Innovation Lab with Cornell University

USAID has provided funding to Cornell University to found a "Feed the Future Innovation Lab for Crop Improvement" on campus. The lab will prioritize research into crop breeding technologies, and design innovative methods for distributing such technologies to smallholder farmers.

Partnership with Mastercard to Promote Economic Inclusion

USAID's partnership with Mastercard will focus on providing new financial opportunities to smallholder farmers and micro-entrepreneurs throughout the world.

Partnership with John Deere to Increase the Reach of Technology and Machinery to Smallholders

The Hon. Mark Green, Administrator of USAID, announced a partnership with John Deere aimed at providing smallholder farmers with access to technologies, machinery, capital and maintenance.

Establishment of the USAID Bureau for Resilience and Food Security

USAID announced an initiative to establish a Bureau for Resilience and Food Security that will aim to strengthen field support to improve water security, food scarcity, poverty and malnutrition in communities around the world.

ANNOUNCEMENT OF THE ROCKEFELLER 2050 FOOD SYSTEM VISION PRIZE

Roy Steiner, Senior Vice President for the Food Initiative at the Rockefeller Foundation, announced the Rockefeller 2050 Food System Vision Prize which will distribute a prize of \$2 million USD to winners from around the world that create "compelling and progressive visions of the world's food system by 2050."

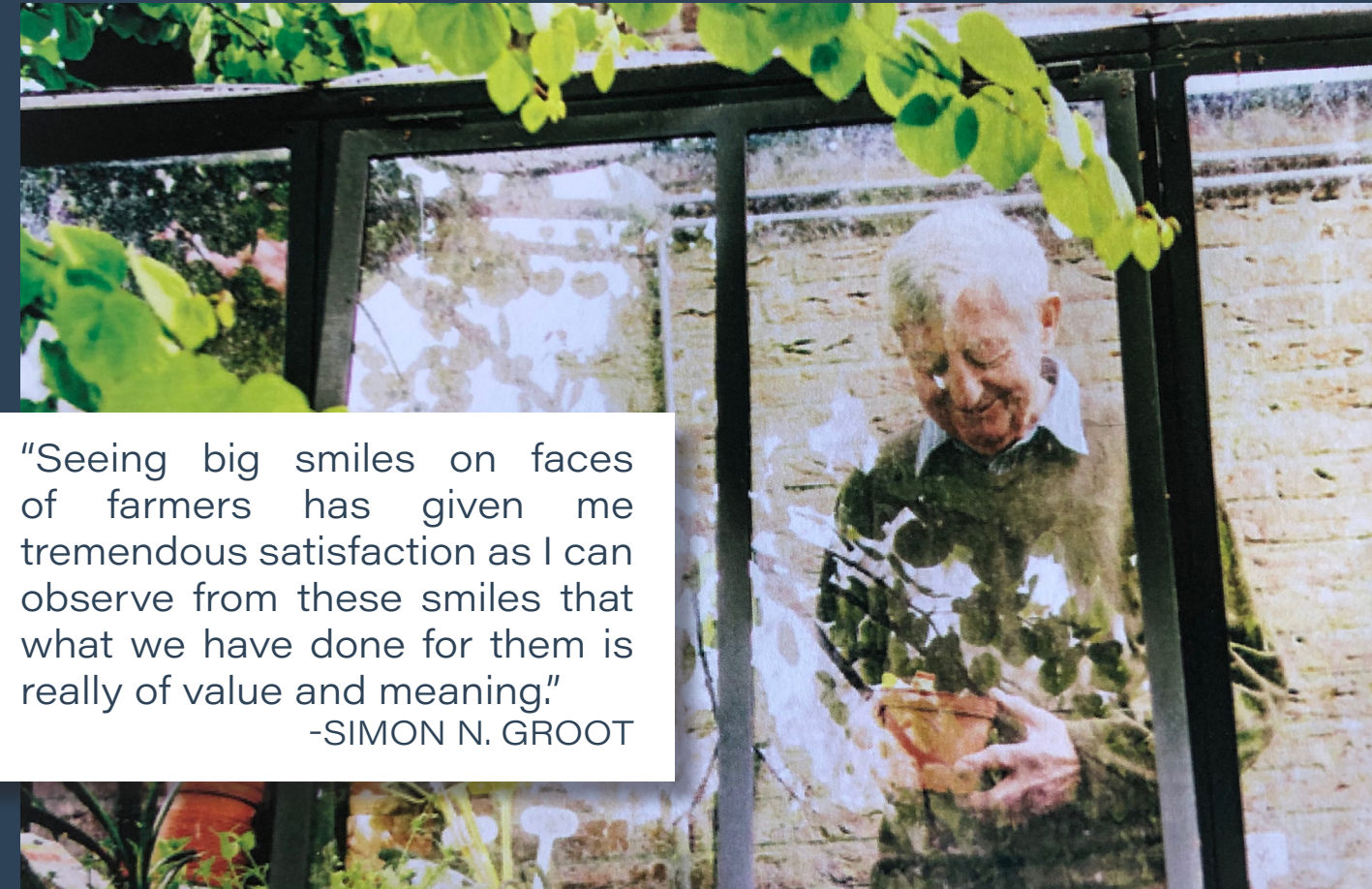
ANNOUNCEMENT OF THE AMBASSADOR KENNETH QUINN WORLD FOOD PRIZE SCHOLARSHIP PROGRAM BY IOWA STATE UNIVERSITY COLLEGE OF AGRICULTURE AND LIFE SCIENCES

The College of Agriculture and Life Sciences at Iowa State University announced the Ambassador Kenneth Quinn World Food Prize Scholarship Program, making scholarships available to incoming students that have participated in World Food Prize youth programs.

ANNOUNCEMENT OF THE CORTEVA AGRISCIENCE CLIMATE POSITIVE CHALLENGE

James Collins, CEO of Corteva Agriscience, announced the investment of \$500,000 into the creation of the "Corteva Agriscience Climate Positive Challenge" which will reward farmers for using environmentally-conscious practices.

HIGHLIGHTS



"Seeing big smiles on faces of farmers has given me tremendous satisfaction as I can observe from these smiles that what we have done for them is really of value and meaning."

-SIMON N. GROOT

THE THEME OF THE 2019 BORLAUG DIALOGUE INTERNATIONAL SYMPOSIUM, **"PAX AGRICULTURA: PEACE THROUGH AGRICULTURE"**, RECOGNIZED DR. NORMAN BORLAUG'S COMMITMENT TO GLOBAL PEACE AND AGRICULTURE ALMOST FIFTY YEARS AFTER HE RECEIVED THE NOBEL PEACE PRIZE. AGRICULTURE'S HISTORIC ROLE IN PROMOTING STABILITY FOLLOWING PERIODS OF CONFLICT AND PEACE HIGHLIGHTS A CRUCIAL REASON TO CONTINUE AND INCREASE INVESTMENT IN THE SECTOR. FINANCES AND INTELLECTUAL CAPITAL MUST BE INVESTED IF FUTURE GENERATIONS ARE TO CONTINUE PROMOTING PEACE THROUGH AGRICULTURE. THE FOLLOWING TOPICS EMERGED DURING THE COURSE OF MULTIPLE PANELS OVER TWO-AND-A-HALF DAYS.

INVESTMENT AND CAPACITY BUILDING

The role that **smallholder farmers** play in global food security is often underemphasized. In order to assist smallholder farmers and local entrepreneurs, funding must be allocated to provide **technologies that will allow for increased sustainability and efficiency**. Turning away from manual methods like the hand hoe and turning towards increased mechanization to more efficiently feed increasing populations is one example of technological adaptation. In order to fund these transformations, many farmers will turn to loans. Josephine Okot, Managing Director of Victoria Seeds Ltd., spoke of the importance of agro-industrialization and the **necessity of funding in the industry**. For smallholder farmers to be able to expand and prosper in developing countries, Okot emphasizes the necessity of providing affordable loans that can be maintained. This requires institutions to be prepared to cover the risk of lending money at lower interest rates.

The private sector's contributions towards increasing global food security by **providing funding, facilitating research and developing new technologies** are an integral component in agricultural advancement. Their ability to invest in research and developmental projects that the public sector often cannot afford to invest in allows for the production of cutting edge technologies and innovations that can assist farmers around the world. Advancement in crop genetics, using systems like CRISPR-Cas, is one notable example of technology that positively impacts crop resilience and yield on a global scale.

While some would call it **capacity building**, Jessica Adelman, Group Vice President & Chief Corporate Affairs Officer at the Kroger Company, would call it "zero wasted human capital." In her comments on the concept of waste, she spoke specifically of the value in retraining individuals working within the food supply chain, especially considering the impacts of **increased technological disruption in the labor force**, as workplaces shift towards automation.

Along with the development of research and technologies, a number of speakers stressed the importance of **knowledge sharing and information accessibility** for the success of small-holders. Dr. Emma Naluyima, recipient of the 2019 Africa Food Prize and a private farmer and veterinarian from Uganda, spoke specifically about the ways in which the educational training she pursued allowed her to greatly improve her production while simultaneously decreasing the amount of land she uses for crops and feeding livestock. In addition, Ambassadors Kristie Kenney and Nancy Powell both emphasized the key role that education plays in **reducing the propensity for conflict** and addressing gender inequity.

GENDER EQUITY

The role that women play in agricultural development continues in importance as we look to the future. **Women comprise the majority of labor in the farming industry**, and technologies that benefit them must be advanced. Dr. Emma Naluyima has built her livelihood around sustainable farming and the empowerment of Africa's young people, especially women. Naluyima believes that the **education** of young women benefits the development of their country and the world by empowering them to provide for their families, and allowing unique, individual opportunities to make a profit farming. This **empowerment** also has positive impacts on their home life, decreasing instances of domestic abuse as women became more cognizant of their personal agency and power as individuals. Naluyima connected education and **resilience**, and stated that as women and girls have increased resources, they become less vulnerable.

Women play an integral role in the agriculture sector, and are often the most vulnerable in times of food shortage. Tjada McKenna, the Chief Operations Officer of CARE, stated that women, on average, constitute a majority of the victims in disasters or humanitarian conflicts and that discussions about mitigating conflict situations through agriculture must emphasize the role of women. This sentiment was mirrored by the Hon. Gerardine Mukeshimana, who has seen the important contribution women make in the agricultural transformation in post-civil war Rwanda. Women took integral positions in restructuring and renewing the Rwandan agricultural sector and were key actors in the effort to build a strong and inclusive economy following the conflict of 1994.



YOUTH ACTION

As population increases on a global scale, we recognize that Africa will experience the most drastic expansion, becoming an increasingly "young continent." As such, the **empowerment and education of youth** should be a priority in upcoming years. Citing a study conducted in areas of rural Africa, Professor Joachim Von Braun, the Director of the Center for Development Research and the Co-Chair of the Malabo Montpellier Panel at the University of Bonn, reported that many African young people feel they currently do not have **access to the resources** needed to succeed outside of an urban setting. And, if the statistics hold true, fewer African youth will be interested in pursuing careers in agriculture. Von Braun stated that while a majority of respondents do not wish to relocate, many young people feel the only pathway to success lies outside of rural settings, as they have witnessed farmers struggling to succeed with the "old-fashioned tools" utilized on their farms.

We must provide much-needed resources to developing rural regions in order to encourage young people to pursue a future in farming. Efforts should be made to **improve the technology and mechanization** that rural regions have access to. Hon. Agnes Kalibata, President of the Alliance for a Green Revolution in Africa (AGRA), believes that the implementation of newer, more efficient technologies in rural regions will not only benefit the lives of farmers in these areas, but also encourage more young people to consider agriculture as a career path by providing them with means to success in the field. H.E. Felix Tshisekedi, President of the Democratic Republic of the Congo, spoke on the necessity of **investing in agriculture** to provide young people financial support and future opportunities within the sector - "As Africa is a young continent, it is, above all, young people who must be at the forefront of these fights against hunger."

CLIMATE CHANGE

Climate change and climate action were at the forefront of discussions at the Borlaug Dialogue in 2019. Many speakers addressed the **urgency that the climate crisis posed** as a part of their calls to action. Dr. Rattan Lal, Professor of Soil Science at The Ohio State University, Dr. Ismail Serageldin, Founding Director Emeritus & Member of Board of Trustees of the Library of Alexandria and Nicolas Denis, Partner at McKinsey & Company, presented chilling statistics about the realities of climate change and the impacts it will have throughout the world. Crop suitability is projected to shift between regions, bringing dire consequences such as famines and high numbers of global refugees, as temperatures deviate from the norm even four to five degrees. Serageldin noted that 90% of all energy consumption comes from fossil fuels, despite global efforts to cut back. He warned that continuing to advance this trajectory would result in an increase in erratic weather conditions, such as hurricanes and fires, which will devastate crop production and impact the livelihoods of the world population. All three speakers emphasized **the need for immediate action** within the agricultural sector to advance adaptation, as well as the necessity of collaboration across industries to make substantial change.

Erik Fyrwald, CEO of Syngenta, highlighted that the private sector must adjust its practices in order to reduce carbon emissions, protect natural resources and counter climate change. **Regulatory changes** that allow the private sector to continue to prioritize the wellbeing of the farmer is crucial. Fyrwald emphasized

that working towards more sustainable farming practices and resolving a lot of issues plaguing the sector will involve cooperation to cut back on food wastes and reduce damage caused by practices such as deforestation.

To do so, farmers must have access to training on utilizing tools they have, as well as new technology, to farm efficiently and conscientiously. New technologies allow farmers to engage in **"climate-resilient adaptation"** said Erin Fitzgerald, CEO of the USFRA. Dr. Tom Thompson, Associate Dean and Director of Global Programs at Virginia Tech, emphasized the need to implement strategies that increase agricultural productivity without harming the environment. Thompson stressed the need to **distinguish between "production" and "productivity,"** noting that innovative and environmentally friendly increases in productivity will protect agricultural and natural lands in the production process. David Festa, Senior Vice President of Ecosystems at the Environmental Defense Fund, addressed the necessity of creating a metric for defining "eco-friendly practices" within the industry. Jim Collins, CEO of Corteva Agriscience, announced the launch of the Corteva Climate Positive Challenge to reward farmers using climate positive practices and incentivize action in emissions reduction. Collins noted the necessity of effective environmental regulations within the sector, and stated that farmers complying with these practices and developing innovative and sustainable methods and technologies would be reinforced in this initiative.



NUTRITION



When considering food security, improved nutrition must be elevated on a global scale. 2019 World Food Prize Laureate and founder of East-West Seed, Simon Groot, shared his experience about **disseminating high-quality vegetable seeds** throughout Asia, leading to **more nutritious and available produce**. By identifying crop varieties that would provide needed nutritional value, suitable to the climate of specific regions, Groot was able to introduce his hybrid seeds into markets throughout the world, significantly improving yield and nourishment in these areas. Groot emphasized **the need to educate farmers** about the important role seed quality plays in crop yield and nutritional value. In his experience, farmers resist investment in unknown products. He noted that selling seeds is more than just developing a new variety. Improved varieties must be accompanied by a comprehensive marketing program suitable to the environment and farmers' individual needs.

Marie Haga, former Executive Director of Global Crop Diversity Trust, emphasized the **ecological and nutritional value of crop diversity**. While it is important to produce a sufficient quantity of food, nutritional quality is equally as important in the fight against global hunger. Dr. Rattan Lal echoed these sentiments. Lal emphasized the important role soil in producing a nutritious yield, and how we must **protect soil quality** through the use of **sustainable farming techniques**. The restoration of carbon stock within soil should be given priority; through techniques such as "inelastic neutron scattering," researchers can measure the amount of carbon within soil and

determine adjustments needed to restore and maintain carbon levels. Further, soil quality is an inextricable component of food systems. Lal urged policies and practices that protect the health of soil as a natural resource.

Protein is an essential component of a nutritious diet. While livestock and aquaculture are important sources, alternative proteins, such as soy, should also be considered, according to Polly Ruhland, CEO of the United Soybean Board. Ruhland highlighted that soy contributes to the **"protein chain,"** providing sufficient **nourishment to humans and livestock**. Commodity trade plays a key role in shaping relationships between regions, but also has considerable impact on the delicate global food system. In discussing soy protein, John Heisdorffer, Chairman of the American Soybean Association, highlighted the export of Iowa soy into countries around the world, specifically for its value as an **alternative protein** for childhood nutrition. Ambassador John Negroponte spoke specifically of the ripple effect of the U.S.-China trade dispute, which severely affected soybean farmers and soy consumers alike. Such shocks to the economic and political order have consequences lasting for years, even generations.

A number of organizations are linking issue areas in a more intentional and beneficial way. Liz Hare's efforts as the Executive Director at World Initiative for Soy in Human Health (WISHH), is an example of the vital role of connecting issue areas of human health and soy production that often operate in silos.



INNOVATION

Research and innovation infused all discussions at the Borlaug Dialogue, as they continue to be highlighted in global discussions. The **evolution of technologies**, tools and policy approaches have pushed the conversation around food systems to new heights. One of the main guiding principles driving innovation is **the need for resilience**. Mark Green, Administrator of USAID, shared that resilience will be a key pillar in USAID's efforts moving forward, stating that the newly minted USAID Bureau for Resilience in Food Security will "bridge the gap between food assistance with humanitarian aid and food security, helping families and communities take ownership of their lives and livelihood."

According to Professor Louise Fresco, President of Wageningen University and Research, innovating for resilience requires **optimization of existing research**. Fresco noted the importance of sharing data across sectors in order to increase public sector advancements, while maintaining the innovation of private initiatives. Optimizing the path towards innovation requires **access to information and data** to allow producers and researchers to continue to develop groundbreaking technologies. This imperative was highlighted by Dr. Chavonda Jacobs-Young, Administrator of USDA Agricultural Research Service and the Acting Chief Scientist of USDA, who expressed the importance of disseminating such information to all types of consumers. And, farmers as information consumers will find innovative ways to increase productivity through new farming methods, while receiving key information about breakthroughs in the field.

Ken Isley, Administrator of the USDA Foreign Agricultural Service, called for the **"harmonization of regulations"** in order to allow innovation to flow freely. He emphasized the critical role achieving broad buy-in for innovations, whether from the scientific community or the general public.

One of the biggest challenges in spreading agricultural innovation is convincing stakeholders of the benefits of new mechanisms. Essential agents in spreading innovation in the food system come from the start-up community. Dr. Richard Broglie, CTO of Pivot Bio, specifically addressed the difficulty of getting buy-in from farmers. He offered that positive feedback from farmers who have taken the risk of **utilizing new innovations** has assisted in advancing eco-friendly technologies within the industry. Han Chen, CEO of ZeaKal Inc., echoed this, highlighting the need to **build consumer trust** in new technologies and products.

Dr. Felister Makini, the Deputy Director General, Crops of KALRO, and Dr. Neal Gutterson, the CTO of Corteva, spoke to the need to **improve technology that directly impacts farmers**, such as advancing tools for breeding to improve quality and quantity of crop yield. Such sentiments were mirrored by Rodger Voorhies, President of Global Growth and Opportunity at The Bill and Melinda Gates Foundation, who highlighted the need for innovative technologies that would increase **crop resilience and productivity**. Mick Messman, CCO of GreenLight Bioscience Inc, spoke on the need to develop technologies for farmers that would allow them to reach maximum productivity while complying with regulatory standards, and stated that these issues often require **alternative solutions**. Paul Kuc, CFO of Provivi, mentioned one such solution to the long-standing issue of insect infestation in crops. Provivi, a startup company, develops pheromones to counter harmful insects in crop production while sparing those that benefit the ecosystem. Kuc stated that the goal of the company is to provide pheromone technology to farmers at an affordable price as an alternative to insecticides.

POLITICAL AND REGULATORY SHIFTS

In discussing the need for meaningful action, Dr. Chris Nelson, CEO of Kemin Industries, specifically mentioned that the challenges in food insecurity are rooted in **political and regulatory institutions**. In order to allocate funds towards development procedures and research into food security, there must be **sufficient political will** at multiple levels. Josephine Okot, Managing Director of Victoria Seeds, Ltd., stated that while political will is necessary on a regional basis, discussions must also take place on larger platforms at the national and international levels, in order to address the broad effect of food scarcity.

Liam Condon, President of the CropScience Division of Bayer AG, agreed that it is essential to encourage a **"broad-based dialogue"** centered around the needs of farmers. This is necessary to engage individuals from a wide array of sectors in the conversation about food security and to seek improved understanding about improvements needed within the agricultural industry. Inclusion leads to increased **partnerships between the public and private sectors**, building on the common interest of improving the lives of farmers and promoting policies that benefit agricultural development.

Sir Mark Lowcock stated that **the humanitarian network** demonstrates the will to solve issues such as food security on a global basis, incorporating aid from individuals and governments across the world. Ambassador Ertharin Cousin referenced the long-lasting support that humanitarian efforts have received from United States policymakers and how that contributes to food security and climate change action. Ambassador Josette Sheeran added that accessibility is an important factor when it comes to food security and that humanitarian work has played a key role in increasing access to food. Dina Esposito, the VP of Technical Leadership of Mercy Corps, emphasized the **necessity of humanitarian assistance in rebuilding communities** after disasters and improving their resilience to withstand future crises.

INFRASTRUCTURE

In regions that are unable to produce a sufficient amount of protein, **transportation strategies** to improve access and distribution of protein must be devised. Samuel Kwame Ntim Adu, CEO of Yedent Agro Group, discussed the role that access to protein has played in improving the nutritional quality of food in Ghana, largely due to the **market and networks of transportation** developed around plant-based proteins.

Infrastructure plays a central role in agricultural development, with enormous and extensive benefits to farmers and individuals. The Hon. Chanthol Sun discussed the role that infrastructure played in reintegrating the Cambodian people following the rise and decline of the Khmer Rouge. Infrastructure provides farmers with the means to share their goods and positively **contributes to the overall stability** of regions. Ambassador William Brownfield shared his experience in the development of critical infrastructure following conflict in countries like Afghanistan and Iraq. He emphasized the necessity of infrastructure maintenance during peacetime.



COLLABORATION AND PARTNERSHIPS

Efforts to address food security, poverty, malnutrition, climate change and other issues have developed somewhat separately for decades. However, in an increasingly globalized world, "we can no longer afford to actually have siloed information," according to Sara Menker, CEO of Gro Intelligence. **Multi-sectoral collaboration** plays a significant role in increasing food security and advancing commitments for the common good. Dr. Shenggen Fan, Director General of IFPRI, encapsulated and said, **"We must challenge ourselves to move towards a new food system** that can address the climate crisis, food and nutrition crises and many other challenges." This statement from Dr. Fan points to the need for collaboration and partnership elevated above governmental and institutional differences, as well as a broader understanding of a 'food system.' An example of this is the inter-American early warning system for coffee leaf rust mentioned by Dr. Victor Villalobos, Secretary of Agriculture and Rural Development of Mexico.

Dr. Ismail Serageldin, Founding Director Emeritus of the Library of Alexandria, emphasized the need to address issues at a global scale as "the climate doesn't care about where the political boundary comes from." The **intentionality behind collaborative action** is as important as the action itself. As Dr. Gunhild Stordalen, Founder and Executive Chair of the EAT Forum, stressed in her remarks, it is necessary to "create a more truly inclusive arena for stakeholders."

Including **a diverse variety of perspectives** - especially those of the communities that are the focal points of international aid and development efforts - allows for more comprehensive solutions to food system challenges. Heidi Kuhn, CEO of Roots of Peace, emphasized the distinct advantage in partnering with implementing organizations on the ground in demining efforts because they offered a richer understanding of the local context. Amplifying the same point, Ambassador George Moose, Vice Chair of the Board of Directors of the U.S. Institute of Peace, stressed the **importance of sensitivity and attentiveness to local systems** and needs. Dr. James Smith, the CEO of Aegis Trust, shared a touching story of neighboring Hutu and Tutsi villages that shared tools with one another following the Rwandan genocide. The tools allowed for more innovative farming methods and served as a means of **reconciliation between the villagers**. Smith's story emphasized the need for collaboration on every level.





CONCLUSION

Sowing Peace through Agriculture requires a **multi-faceted approach** for issues concerning food security. Agricultural development played a historic role in the peacemaking process, but can only assist in promoting peace if we support farmers and their land. The threat of climate change, and the inevitable consequences of rising temperatures, will continue to disrupt current food systems, resulting in global unrest and vulnerability. We must address the implications of **climate change** on agriculture, as we promote sustainable and renewable practices on a global scale. We must **support farmers** so they can support the world with their productivity. This includes providing them with adequate funding, tools and technology. Looking to the future, we must **invest in today's youth**, financially, through technology and with increased opportunities to engage in the agricultural sector. To achieve **Peace through Agriculture**, and to realize the dreams of **Dr. Norman Borlaug**, we must continue to work together, raising the right questions and driving for innovative solutions to address the scourges of global food insecurity.