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Around 170 signatories representing Noble Laureates, former Government leaders, sitting heads of Agricultural universities & multilateral organisations and other experts have written an open letter to the UN, G-20, and National Governments to address the medium and long term impacts of COVID 19 on agriculture, food and nutrition security.

The COVID 19 crisis has pushed the farmers and the agriculture sector around the world to uncertainty. The crisis has thrown an unique challenge to the leaders and while they are trying their best to help the farmers on priority, lack of agri inputs such as seeds, fertilisers, pesticides on ground is making the farmers worry about harvesting the current crop and planting for the next season. Supporting agriculture sector is vital as supply chains are disrupted, consumers are paying high prices, children are deprived of school feeding programme as the schools are closed, families who depend on food assistance programmes by government are struggling to get access to raw materials. Below are some of the recommendations given by the experts to help the governments understand the gravity of the situation and subsequently address it:

Support farmers to meet demand & supply – Disruption in supply chain will affect agriculture adversely. Unavailability of agriculture inputs before the sowing season will affect the food supply for next 6 to 24 months. Urgent action is required to ensure adequate credit and agricultural inputs are available to farmers for streamlining the demand and supply. Transportation, storage and distribution systems need to be enhanced, including the capacity to change production systems to meet shifting demands.

Support local & regional supply chain based on local food system - Re-build resilient local and regional supply chains based on diversified local food systems and sustainable natural resource management. Concerted actions are urgently needed to ensure crops can be harvested and planted in the coming months and establishing efficient food collection and distribution systems that can deliver nutritious food to hungry people, especially women and children.

Concerted efforts to achieve SDG – Actions should be taken at local, national, regional and global level through a well monitored and coordinated approach on agriculture & food security front. Many countries were lagging in SDGs before the pandemic and to ensure food and nutrition security for the population along with managing environmental and climatic factors, countries will have to reconsider a new strategy. We now need more transdisciplinary research to develop more resilience of our agricultural and food security systems in the medium term.

Science, Technology, and Innovation (STI) – STI is essential for addressing COVID-19 and impending global threats and challenges. Adoption of ICT and acceptance of technology will help increase productivity and income, adopt 'More from Less' approach, research should bring new technologies to markets, including 'out-of-the-box' ideas such as meats from single cell proteins to biofuels from algae; from accelerated fish farming to improved livestock breeding to plant-based proteins. Such frameworks should enable rapid movement from 'lab to land' and from 'farm gate to consumer plate'.

The experts are calling for a rigorous effort to address the challenges in food security through the above recommendations. Developing a strategy by following best practices, implementing actions on ground by governments, regional banks, bilateral agencies, private sector, NGOs, international organizations towards one goal - supporting farmers and consumers in all countries.

This pandemic has given the world a unique challenge, it has brought in front the unsettled issues in the food system and an opportunity to address these gaps. Together we have the capacity and resources to streamline the sector, if we miss this opportunity we are waiting for a catastrophe. The open letter is provided at the end of the newsletter, you may refer to it for more recommendations from the experts. In this newsletter, we have captured interesting developments and research work from around the world in the agri industry. We hope you find it a good read.

Shivendra Bajaj
Executive Director
Federation of Seed Industry of India-Alliance for Agri innovation

AgBiotech News

Lab-made 'Incredible Cotton' may grow 10 times faster and cut environmental impact of the traditional crop

(Forbes)

The method is ten times faster and uses less than 80% water and land while emitting only a fraction of the greenhouse gas compared to traditional cotton. The price would be the same as for the high-quality cotton on the market today. A bunch of different cotton plants are there in the greenhouse. One cut a piece of the plant and that plant has a bunch of stem cells. The stem cells have the ability to pretty much transform into any part of the plant. The cells are segregated into large vessels (similar to brewing beer) full of nutrients to make the cells multiply, then into another vessel where they differentiate into fibers. Instead of growing the whole plant, we go from the cell directly to the fiber. The process is said to be 10 times faster than traditional farming, or 18 days compared to 180 days.

GM crops now allowed in SA as ban goes

(9 News)

New laws to allow genetically modified crops to be grown on the South Australian mainland have passed state parliament. The legislation, the result of an agreement between the Liberal government and the Labor opposition, lifts a moratorium on GM crops first imposed by Labor in 2003. However, the ban will remain in place on Kangaroo Island.

Bolivian farmers reject activist opposition to GMO seed approvals, expecting crops yields to triple

(GLP)

The Association of Oilseed and Wheat Producers (Anapo) supports the decision made by the transitional government, Anapo expects to triple its production from 4.5 million tons per year to 12 million. The Eastern Agricultural Chamber (CAO) noted that the use of transgenic seeds will allow

better use of agrochemicals, elimination of carcinogenic insecticides in the control of pests, less use of water by reducing the number of applications, and reduction of soil erosion and predation.

Financiers of Poverty, Malnutrition And Death (Part II) – OpEd
(Eurasia)
It's easy to farm organically in the wealthy, advanced EU and USA, where consumers can afford much more expensive organic meats, eggs, fruits and vegetables. It's much harder if you have to deal with the insects and crop diseases that plague African farmers on constant massive levels and locusts that bring true catastrophes every few decades – and then sell your meagre crop yields to impoverished families. A 2005 Congress of Racial Equality biotechnology conference in the United Nations General Assembly hall and a related video documentary, "Voices from Africa: Biotechnology and the subsistence farmer," dramatically highlighted the difficulties facing the continent's farmers – and the ways GM/biotech crops can improve their lives, especially crops enhanced with Bacillus thuringiensis (Bt) genes that enable plants to kill insects that feed on the crops, while leaving beneficial insects unharmed.

30% bigger crop yields; 60% less pesticide use—The massive impact of GMO Bt insect-resistant eggplant in Bangladesh
(GLP)
Since entering the market in 2014, Bt brinjal [eggplant] has helped smallholder farmers in Bangladesh achieve higher yields, a 60 percent reduction in pesticide costs and a six-fold increase in net returns. The crop has been so successful that the USDA Foreign Agricultural Service recently released a report that hailed Bangladesh as "a role model of acceptance and advancement of modern agricultural biotechnology."

Genetically Engineered Crops: A Necessity for Food Security
(European Scientist)
A letter from a collective of scientists to the EU noted that in order "to address challenges like this and meet food production goals efficiently, we will need to use all knowledge and technical means available and thus also new technologies, specifically biotechnology." Additionally, in March 2020, the EASAC called for radical reform of EU legislation around GMOs, noting that the EU needs to capitalize on these new plant breeding techniques to create climate-resilient crops that are designed to address concerns around food security and nutrition. The scientific community is pushing back hard to shift the opinion and has pressured the European Parliament Council has requested a study from the European Commission on the status of new genomic techniques under EU law.

Gene editing will revolutionize crop breeding in Africa, new paper predicts
(Alliance for Science)
Genome editing technology has the potential to revolutionize crop development on the African continent, especially in sub-Sahara Africa, according to a new scientific paper. The paper, published in the Frontiers in Plant Science Journal by John Komen and five other scientists working in Africa, noted that CRISPR-Cas9 is already being used to improve major staple foods in Africa, such as wheat, cassava and banana, among others, and the research results are looking promising. International agricultural research centers, in collaboration with national research organizations in Africa, also are adopting genome editing in their research and development programs

Why biotech's goal should not be to feed the world
(Synbiobeta)
It is possible to feed the world with biotechnology. But it's only possible if our goal isn't to feed the world, but to engage local communities, support early, equitable, and inclusive communication, and to ensure that food equity doesn't just mean that everyone can afford to buy healthy food, but that the communities producing that food have equitable economic stake. Move over, big ag — it's time to take biotechnology from farm to table.

Biotechnology Offers Hope for the World's Hungry
(Townhall)

Whatever the new normal will be, we should sustain and increase efforts to reduce premature mortality from starvation and the effects of malnourishment, which often retard normal bodily and mental development, limiting the ability of millions of people to flourish each and every year. Thankfully, the judicious use of biotechnology to produce stronger, disease resistant, pest-resistant, vitamin fortified crops that more efficiently use water can increase food production the three fold needed to adequately feed the world's expected nine billion people.

COVID-19 may stall Nigeria's rollout of GMO cowpea
(Alliance for Science)
The COVID-19 pandemic may delay the rollout of pest-resistant Bt cowpea, Nigeria's first genetically modified (GM) food crop. The country's lockdown, imposed to stop the spread of the new coronavirus, has made it difficult to get the improved seeds out to farmers, said Dr. Rose Maxwell Gidado, the country coordinator for the Open Forum on Agricultural Biotechnology (OFAB) Nigeria chapter. The government's decision to allow the commercial release of Bt cowpea, which resists the destructive pod borer insect without the use of pesticides, elicited excitement among Nigerian farmers. They have been eagerly awaiting the planting season to try the new crop in their own fields after battling pod borer (Maruca) infestations for years. The Maruca outbreaks have been so severe, and the crop losses so significant, that a number of farmers have quit growing cowpea out of frustration. They saw hope in the Bt cowpea, which scientists have determined confers 100 percent protection against Maruca through the use of genetic modification to introduce the Bacillus thuringiences (Bt) gene.

How consumer fear and misguided regulation limit the progress of crop biotechnology
(GLP)
There is a profound disconnect between what the latest gene-editing methods can do to increase yields and enhance crop disease and stress resistance and the trickle of such improved crops actually getting out into farmers' fields. The first generation of genetically modified (GM) crops has been remarkably successful. The whole world eats food containing ingredients derived from GM crops and feeds them to its myriad agricultural animals and pets. Despite many dire predictions of long-term negative health effects, a quarter century has passed, and none have materialized.1 This remarkably clean track record should have assuaged public fears and assured the rapid development and adoption of GM crops of all kinds.

Plan to give farmers free GMO cotton seeds begins
(Standard Digital)
The Government of Kenya has started the distribution of free cotton seeds to farmers, including a genetically modified variety, in the latest push to revive the cotton industry in the country. According to the Ministry of Agriculture, 16 metric tonnes of hybrid seeds and one metric tonne of BT cotton seeds will be distributed across 24 counties. The consignment is worth Sh64 million and is expected to produce over 2,000kg of cotton per hectare against the current average yield of 572kg per hectare. Kenya now joins six other African countries - South Africa, Sudan, Ethiopia, Malawi, Nigeria and Kingdom of eSwatini - in commercial cultivation of insect-resistant, genetically modified Bt cotton.

Low-hanging fruit: How the first generation of GMO crops yielded massive economic and environmental benefits
(GLP)
Both herbicide-tolerant and insect-resistant crops have been adopted at breakneck speed in every country in which they have received regulatory approval. As of 2018, the latest year for which statistics are available, GM crops were grown on 474 million acres in 26 countries. This represents a more than 100-fold expansion in GM crop acreage over the 23 years since their commercial introduction in 1996. By 2018, the adoption rates of biotech crops exceeded 90% in the top 5 adopting countries (USA, Brazil, Argentina, Canada and India). The rapid adoption of GM crops has returned benefits substantially beyond expectations. A 2014 study on the cumulative global impact of GM crops since 1996 concluded that farmers' yields increased by 22% and their profits by 68%. A more recent study reported that the net economic benefit at the farm level was roughly $18 billion for 2016 and 186.1 billion for the period 1996-2001.

Five Countries Produce More than 90% of Biotech Crops Worldwide

(ISAAA)
High adoption of biotech crops continued in 2018 with 26 countries planting 191.7 million hectares worldwide. This area is an increase of 1.9 million hectares or 1% from the previous year's area. The average adoption rate in the top five biotech crop-growing countries increased to reach close to saturation, with the United States at 93.3% (average for soybeans, maize, and canola), Brazil at 93%, Argentina at close to 100%, Canada at 92.5%, and India at 95%.

Brexit unlikely to change UK's restrictive GMO crop rules in the next 3 years, USDA reports

(USDA-GAIN)
In his inaugural speech as Prime Minister (PM) in July 2019, Boris Johnson said "let's liberate the UK's extraordinary bioscience sector from anti-genetic modification rules." Also, "let's develop the blight-resistant crops that will feed the world." There is a growing sense that the UK needs a considerable degree of freedom in any terms that it negotiates with the European Union (EU). Brexit has the potential to change many policy areas, including agricultural biotechnology. However, in the short to medium term (1-3 years), the current landscape for cultivation and importation of genetically engineered (GE) products is not expected to alter. The UK will always be mindful of EU import requirements and approvals when setting their own.

GMO tomato as edible COVID vaccine? Mexican scientists work to make it a reality

(GLP)
While large companies and public sector consortiums in the United States, Canada, China and Europe are running at full speed to develop a vaccine grown in genetically modified (GM) tobacco plants, a research group at a Mexican university is working toward the same objective, but with a different and innovative strategy. They are using bioinformatics and computational genetic engineering to identify candidate antigens for a vaccine that can be expressed in tomato plants. Eating the fruit from these plants would then confer immunity against COVID-19.

Research

Improving berries through CRISPR

(Horti Daily)
Pairwise will blend CRISPR gene-editing technology with germplasm of existing berries to create new varieties. Plant Sciences, Inc. (PSI), a berry breeder and ag research company in California, will be Pairwise's germplasm provider. As a result of this fruitful partnership, consumers could see new varieties of black raspberries, red raspberries and blackberries in the supermarket's produce aisle within a few years.

Systems Biology and Synthetic Biology in Relation to Drought Tolerance or Avoidance in Plants

(Frontiers)
Drought stress has been a long-time limitation to crop production that is being exacerbated by climate change and associated reductions in the availability of blue water resources for agriculture. Most existing food and industrial crops are susceptible to drought stress, which can cause a significant loss in crop yield. Therefore, our ability to develop more climate-resilient crops that are more heat and drought tolerant will become increasingly important in the near future. The knowledge about the genes associated with drought stress responses generated by systems biology research can inform the construction of libraries of biological parts for synthetic biology, which aims to design or re-design biological processes. Synthetic biology has great potential for creating genetically modified plants with enhanced drought avoidance or tolerance.

CRISPR-Cas9 Technology Reveals Function of OsRhoGDI2

(ISAAA)
Henan Normal University scientists used CRISPR-Cas9 to identify the function of OsRhoGDI2 in rice plants. OsRhoGDI2 was isolated as a putative partner of Rho protein family member from rice panicles by yeast two-hybrid, but its role is still unclear. Thus, Kaijie Wang and the team developed OsRhoGDI2 knockout mutants using CRISPR-Cas9 technology. Sequence analysis of the mutants showed base substitution or base deletion which occurred close to the editing targets of the gene in knockout rice. Analysis of the physical characteristics showed that OsRhpGD12 knockout rice plants had lower plant

height than the control plants. This was further confirmed by statistical analysis, which indicated that the significant reduction in plant height was evident in the second internodes. These findings suggest that the OsRhoGDI2 gene is linked with the regulation of rice plant height.

CBF/DREB1 Gene Family in Lettuce Confers Multiple Stress Tolerance

(Crop Biotech)

US Department of Agriculture scientists conducted a genome-wide search of a gene family in lettuce that plays a vital role in freezing tolerance. The research team performed a comprehensive phylogenetic analysis of the C-repeat binding factor (CBF)/dehydration-responsive element binding (DREB1) proteins in 20 plant species from the Asterid or Rosid clade. Results showed that tandem duplication played a vital role in the expansion of the CBF/DREB1 family. Furthermore, the expression analysis indicated that 12 of the lettuce CBF genes respond to freezing, while three genes are responsive to salt stress, and six genes are linked to heat stress. Compared to Arabidopsis, with CBF/DREB1 family members that respond to only one specific stress, lettuce CBFs give more protection against various abiotic stresses. The findings of the study could be used as a vital reference in the genetic improvement of lettuce, particularly in developing freezing tolerance.

Discovery and characterisation of a new leaf rust resistance gene introgressed in wheat from wild wheat Aegilops peregrina

(Nature)

Wild wheat species Aegilops peregrina (UpUpSpSp), harbours resistance to various diseases including leaf rust and stripe rust. Inheritance studies in a recombinant inbred line population of wheat-Ae. peregrina introgression line IL pau16061 revealed the transfer of a single major dominant gene conditioning all stage resistance, herein temporarily designated as LrAp. Genomic in situ hybridisation of IL pau16061, resistant and susceptible RILs with U- and S-genome DNA probes confirmed that the introgression with leaf rust resistance is from the Up genome of Ae. peregrina. Fluorescence in situ hybridisation using chromosome specific probes identified Up genome introgression to be on the long arm of wheat chromosome 6B. To genetically map LrAp, bulked segregant analysis was combined with resistance gene enrichment sequencing (MapRenSeq). Five nucleotide binding leucine-rich repeat contigs distinguished resistant and susceptible bulks and single nucleotide polymorphism (SNP) markers from these contigs co-segregated with LrAp. All five RenSeq NB_ARC contigs showed identity with the long arm of wheat chromosome 6B confirming the introgression on 6BL which we propose is a compensating translocation from Ae. peregrina chromosome 6UpL due to homoeology between the alien and wheat chromosomes. The SNP markers developed in this study will aid in cloning and marker assisted gene pyramiding of LrAp.

Plants Have Memories, But How Do Plants Forget?

(GMI)

The research team led by Dr. Michael Borg in the lab of Dr. Frédéric Berger at the Gregor Mendel Institute of Molecular Plant Biology (GMI) of the Austrian Academy of Sciences, analyzed histones in pollen, hypothesizing that the process of forgetting would most likely occur in the embedded sperm. The researchers were surprised to find that H3K27me3 completely disappeared in sperm. They also found that sperm accumulate a special histone unable to carry H3K27me3. This ensures that the modification is erased from hundreds of genes, not only those that prevent flowering but also ones which control a large array of important functions in seeds, which are produced once the sperm is carried by the pollen to fuse with the plant egg cell. This phenomenon is called "epigenetic resetting" and is more like erasing and reformatting data on a hard drive.

Comparative Genomics to Develop a Specific Multiplex PCR Assay for Detection of Clavibacter michiganensis

(APS Publications)

Plant pathologists from the University of California, Davis, report the use of comparative genomics to identify specific sequences that are Clavibacter michiganensis detection targets. C. michiganensis is a bacterial pathogen that causes bacterial canker disease in tomatoes, which leads to significant losses in greenhouse and field production systems. Thus, the UC Davis team used DNA sequencing data gathered over the past decade to pinpoint particular genetic locations that accurately detect the pathogen causing bacterial canker. By analyzing 37 different strains of the pathogen, they were able

to develop a diagnostic platform that can be used without restriction to facilitate the distribution of clean tomato seed to growers.

How to achieve drought-resistant crops to ensure food security

(CRAG)

As a consequence of global warming, the incidence of drought in various regions of the world has been increasing. According to the Food and Agriculture Organization of the United Nations (FAO), in developing countries, drought alone causes more yield loss in crop fields than all pathogens combined, putting food security at risk. In a paper published in Science magazine, researchers from the Centre for Research in Agricultural Genomics (CRAG) present different biotechnological strategies to achieve drought resistant crops, which could be used to mitigate the devastating effects of climate change on agricultural production. The CRAG researchers explain that plants use different mechanisms to prevent water loss in ensuring their survival when water is scarce. These natural strategies include changes in the growth and architecture of the roots, closing of the stomata, and acceleration of the reproductive phase.

Exploiting the diversity of tomato: the development of a phenotypically and genetically detailed germplasm collection

(Nature)

A collection of 163 accessions, including Solanum pimpinellifolium, Solanum lycopersicum var. cerasiforme and Solanum lycopersicum var. lycopersicum, was selected to represent the genetic and morphological variability of tomato at its centers of origin and domestication: Andean regions of Peru and Ecuador and Mesoamerica. The collection is enriched with S. lycopersicum var. cerasiforme from the Amazonian region that has not been analyzed previously nor used extensively. The collection has been morphologically characterized showing diversity for fruit, flower and vegetative traits. Their genomes were sequenced in the Varitome project and are publicly available (solgenomics.net/projects/varitome).

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An Open Letter to the UN, G-20, and National Governments on COVID-19 and Agriculture for Food and Nutrition Security

We are writing to call for a set of internationally coordinated, locally relevant actions to **address the medium- and longer-term impacts of COVID-19 on agriculture, food, and nutrition security.** The current global health crisis has disrupted supply chains and laid bare the need to address the inter-related challenges of hunger, malnutrition, climate change, and environmental degradation and has emphasized the need for concerted, proactive and collective actions to achieve the Sustainable Development Goals (SDGs) adopted by the UN in 2015.

We agree with much that is in the strong statements issued by several leading international entities, including the IMF, World Bank, Food and Agriculture Organization (FAO), International Fund for Agricultural Development (IFAD), World Food Program (WFP), the Committee on World Food Security (CFS), the Food and Land Use Coalition, and the GCARD Road Map by the Global Forum on Agricultural Research (GFAR), the International Dryland Development Commission (IDDC), and the Malabo-Montpellier (MaMo) Panel, among others. The leading research institutions of the world, dialogues organized by the World Food Prize, and many others are nudging the world toward the right direction. Many of these international and regional efforts concerning policy analysis and advocacy agree on the urgent need to strengthen International Agricultural Research and Food Security Systems. We reaffirm these suggestions and **want to emphasize the urgency of real action globally on the ground.**

While the COVID19 pandemic is a major public health crisis, food systems around the world are also under great stress. Consumers are paying higher prices, supply chains are disrupted, children are deprived of school feeding programs and families who rely on food assistance are struggling. Farmers have lost their markets and are worried about harvesting their current crop and planting for the next season. Some governments have responded to the crisis with export bans and import restrictions, which can exacerbate price swings and trade tensions that were already high before the COVID-19 outbreak. Governments must keep trade flows open with sensible export and import policies. Others have responded with humanitarian actions and have tried to ensure the effectiveness and efficiency of the food supply chains. While these efforts have been laudable, they are not at the desired scale. We need to re-build resilient local and regional supply chains based on diversified local food systems and sustainable natural resource management. Concerted actions are urgently needed to ensure crops can be harvested and planted in the coming months and establishing efficient food collection and distribution systems that can deliver nutritious food to hungry people, especially women and children. And while short-term actions to address the crisis are vital, we must also address several long-term implications of the crisis for global food systems.

Achieving the SDGs will require actions on the agriculture and food security fronts, and such actions should be at local, national, regional and global level through a well monitored and coordinated approach. Before COVID-19 struck, many countries were lagging in attaining the SDGs. COVID-19 will push those efforts further behind, and thus many countries need to reconsider how best to provide for the food and nutrition security of their populations in the event of long-term supply or demand side disruptions due to public health and its economic effects, while still thinking of environmental and climatic factors. Unfortunately, research on these interlinked challenges continues in the silos of environment, agriculture,

economics, and public health. We now need more transdisciplinary research to develop more resilience of our agricultural and food security systems in the medium term.

Climate change and the disaster risks it portends has not gone away, even if it has been crowded out of the media headlines by the COVID-19 crisis. But COVID-19 has demonstrated a profound impact that human activities have on our environment. Greenhouse gas emissions are declining; water and air quality are improving; birds and wildlife are returning to forsaken habitats. But we recognize that the economic and social costs of the abrupt economic shutdown are not acceptable over the long term, yet it is an opportunity to re-emphasize the importance of conserving natural resources, especially agro-biodiversity, increasing carbon sequestration, improving soil health and water quality, generation of renewable energy, scientific eco-regional planning, efficient water and nutrient use, diversification, greater dependence on locally available plant-based food systems, etc. These would demand a paradigm shift in national priorities.

Science, Technology, and Innovation (STI) are essential in addressing COVID-19 and other global threats and challenges. The revolution in ICT and in biology can help re-imagine the food and agricultural systems to provide food security to the poor, and to transform the sector by reducing its environmental and climate footprints. Disruptive innovations are needed to increase productivity and income through precision farming and timely delivery of inputs to farmers' fields, through a 'More from Less' approach. research should also help bring new technologies to markets, including 'out-of-the-box' ideas such as meats from single cell proteins to biofuels from algae; from accelerated fish farming to improved livestock breeding to plant-based proteins. Such frameworks should enable rapid movement from 'lab to land' and from 'farm gate to consumer plate'.

Nutrition is important to all human beings at all points of the life cycle. For women, health is a human right; their access to good nutrition is fundamental to ensuring good health and underpinning empowerment. In addition, entire families benefit from the realization of women's right to health; the children of women who are well nourished will be healthier, and those children will avoid stunting and wasting and be able to grow into more active, healthier, and productive young people. Supporting nutritious food and agricultural systems also ensures household nutrition security. The medium and long term COVID-19 response must ensure that the needs of all women, men, and children are met, including those who are most marginalized.

The disruption of input supplies will affect agriculture adversely for the next 6 to 24 months. Urgent action should start now to ensure that adequate credit and agricultural inputs (seeds, fertilizers, and pesticides) are available when and where needed to strengthen the ability of the farmers to deliver. Transportation, storage and distribution systems need to be enhanced, including the capacity to change production systems to meet shifting demands.

The international community must help the poorest countries with actions on the ground. The World Bank, the Food and Agriculture Organization (FAO), the World Food Program (WFP), the International Fund for Agriculture Development (IFAD) and the Regional Development Banks have all played – and continue to play – important roles in supporting agriculture and food security. Bilateral donors and regional organizations such as the European Union (EU) and the African Union (AU) also have a major role to play. Together they have operational presence in well over 130 countries and can mobilize action for a better future. The CGIAR can enhance the global research system in working on bringing greater resilience to the Food Security system, and enhanced partnerships with National Agricultural Research Systems (NARS), the private sector, and NGOs.

The UN will be holding the Food Systems Summit in 2021. This will be a major opportunity to craft a well-organized global effort to address these challenges. To ensure that the best practices of the few become the standard practices of the many, and that real partnerships for implementing actions on the ground are forged between all governments and the regional banks, bilateral agencies, the private sector, NGOs, and the international organizations to support farmers and consumers in all countries …

Finally, it is our firm belief that by acting collectively for the common good, motivated by our recognition of our common humanity, and driven by caring and compassion for the poorest and the weakest among us, we can help human society overcome the multi-faceted challenges to the agricultural and food security system brought on by the pandemic, and place society on a much stronger and more sustainable path of growth and balanced development. The time for action is now.

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