

Empowering Farmers

As the world struggles to feed itself, one path forward is clear: **We need to help growers grow**

As a nation, Tanzania has long struggled to feed itself. While its economy has steadily grown over the past decade, over 49 percent of Tanzania's population lives on less than \$1.90 a day. Malnutrition remains high. Over 34 percent of children under age five are stunted and nearly 45 percent of women of reproductive age are anemic.

Tanzania's agriculture sector—which contributes nearly one-third of the country's GDP and employs 75 percent of the population—has the potential to increase incomes and improve livelihoods. In the first Global Food Security Index (GFSI) published in 2012 by Economist Impact, the sub-Saharan African country ranked near the bottom. And then something happened: Tanzania mobilized to help its growers—the vast majority of whom are smallholder farmers.

The 2021 Economist Impact GFSI report highlights
Tanzania's massive leap forward. "Its biggest increase
over the decade has been its ability to cut down on
volatility in food production, which ensures a steady
flow of food and a lesser likelihood of price rises,"
the report states. In other words, farmers adopted
practices and technology that were far more likely to
produce yields able to feed the nation predictably.
The country made other improvements as well, such
as improving its crop storage facilities, allowing for
the safe storage of crops, and increasing access
to electricity and mobile phones, which expanded
access to market data and mobile banking. The result
of all these changes: Tanzanians are far more likely
to be properly nourished. Their country has risen 19

places in the country ranking since 2012 to 90th, and the report notes that "Tanzania's availability of food is now on par with other nations in the GFSI."

Despite the gains made in Tanzania and a handful of other nations in the GFSI, hunger grows globally. To counter this global trend, the Economist Impact's report urged a holistic approach, noting that, among other matters, two significant factors stand out: "the livelihoods of smallholder farmers and the infrastructure to support them."

And the Economist Impact report is clear that while national food-security plans are essential, most future practical solutions need to work at the local level. That's because about 2.5 billion people rely on agricultural production from smallholder farming households for their livelihoods.

When farmers thrive, the world eats. That's why Corteva Agriscience has also committed to helping increase the productivity, incomes, and sustainable farming practices of 500 million smallholder farmers as part of its 2030 Sustainability Goals.

Training for Success

Corteva's investment in smallholder farmers directs resources to emerging and developing communities around the world. As the Economist Impact report notes, "[T]he regions needing the most help are rural areas in Africa, Asia[,] and Latin America, where smallholder farmers predominate and both poverty and hunger are rife." The report maintains that development programs are key to providing the resources necessary to enable local food security.



Corteva Agriscience has contributed to the success story in Tanzania, with efforts that have supported increases in farming productivity and food stability there. The company has collaborated with USAID and ACDI/VOCA to train more than 600,000 smallholder farmers—30 percent of whom are women—to optimize their land and crops. Farmers there learned how to use climate—adaptive seeds, crop protection products, and soil conservation practices. The three—year initiative boosted yields by 300% on average.

In Brazil, Corteva is working with, AGROEFETIVA, a Brazilian company that specializes in technical training and research in agriculture, to help train farmers to make data and technology part of their skill set. The program, called Agriculture Expedition for Life, teaches key programs such as resistance management, which slows, prevents, or reverses the development of resistance among insects. The program also offers information and demonstrations on the application of inputs, to help farmers make the best possible use of their precious resources.

The goal in Zambia is straightforward: Corteva efforts are focused on increasing the productivity and incomes of 10,000 emerging farmers. As part of a collaboration with USAID, John Deere, and Global Communities, Corteva is enabling increased access to technologies and capital and helping to develop market linkages. Meanwhile, agronomists from Corteva are working directly with growers to enhance their farming practices and increase adoption of improved agricultural technologies such as hybrid seeds. Corteva has also installed hundreds of demonstration plots and is providing trial products to farmers

Supporting Women in Farming

Women are a driving force behind agriculture in many emerging and developing communities, which is why Corteva is actively seeking to support female farmers. As part of its 2030 Sustainability Goals, the company seeks to uplift smallholder farmers by doubling the percentage of women farmers served between 2020 and 2030.

That effort takes on many forms. In collaboration with the Brazilian Association of Agribusiness (ABAG) and business school Fundação Dom Cabral, Corteva in 2019 launched the Leadership Academy for Women in Agribusiness. Aimed at helping to shape the future leaders of the field, the academy involves three stages of learning with in-person and online classes. At the end, participants create projects designed to support

women's engagement and leadership in agribusiness. Though launched only in 2019, as of 2021, the academy has already helped more than 160 female farmers from Brazil and Paraguay, with farm sizes ranging from approximately 50 to 100,000 hectares, thus reaching a combined total of 2.1 million hectares. The program engaged more than 4,800 other women through events and workshops.

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Helping Farmers Adapt to a Changing Climate

The Economist Impact 2021 report stresses the extent to which climate change is a pressing challenge to all parts of the food system. "The biggest drag on food security across all countries over the decade is how countries have fared when it comes to protecting natural resources and building up resilience to the climate crisis," the Economist Impact report states. Globally, food contributes to a quarter of greenhouse gas emissions and threequarters of biodiversity loss, according to the report. In line with its commitments, Corteva is focused on actively sharing knowledge needed to build a more resilient food system. The company remains focused on addressing the opportunities in climate adaptation, resilience, and mitigation - working across the agriculture industry and beyond. Corteva is also working with growers in the areas of nutrient management, soil health and water stewardship, leveraging the power of its technology and agronomic expertise.

In the UK, Corteva is working with a regenerative farming organization with a focus on helping farmers locally to offset carbon emissions. The objective of these efforts: Help farmers adopt more



sustainable practices, which offers the twin virtues of simultaneously helping the planet and boosting their own operations. The organization, Gentle Farming, enables farmers to quantify and market the amount of soil carbon they are sequestering into their soils each year. The program will recognize farmers who have already embraced regenerative practices and support those who aspire to such practices.

Improving Market Access

For the six countries that achieved the greatest improvements in food affordability over the past decade, improving market access for farmers was an important step, Economist Impact stated in its report. Corteva Agriscience has sought out opportunities to support innovative ways to help make this happen.

In the Philippines, a social enterprise named AGREA, which helps Filipino farmers sustainably feed local families, saved a pineapple farmer from financial ruin. Cherrie Atilano, AGREA's millennial founder and a farmer herself, helped Sonny Reyes, of Tanay, source a government-owned truck that would get past checkpoints so he could deliver his pineapples to metropolitan Manila-where grateful consumers bought them. This success inspired Atilano to create an online platform, fueled by social media, that would connect urban consumers to local producers like Reyes. Through its #MoveFood initiative, AGREA also acted as a mobile marketplace, buying more than 170 metric tons of produce from 20,000 farmers and selling (or donating) it to feed 70,000 families and 4,500 frontline healthcare workers by August 2020.

To further advance these timely efforts, Corteva provided a one-time community investment grant to AGREA, supporting both its Move Food and Rise Against Hunger initiatives.

Why Corteva Agriscience Sponsors the GFSI

The Global Food Security Index (GFSI) is produced by Economist Impact, an independent research entity. GFSI is a dynamic quantitative and qualitative benchmarking model produced each year, constructed from 58 unique indicators that measure the drivers of food security across both developing and developed countries. The GFSI has proven to be a trusted resource for governments, NGOs, and private enterprise worldwide, equipping them with reliable data to take informed and meaningful action. Corteva's ten-year sponsorship of the GFSI has provided support to these efforts.

GFSI 2021 highlights the need for agricultural innovation by showing we must collectively work to address:

- The threats to agricultural production posed by climate change and natural-resource scarcity;
- The demand for not just more food, but more nutritious food – and more responsive food supply chains;
- The potential of innovation and technology to improve the sustainability of agriculture.

As an agricultural innovator, Corteva Agriscience remains focused on building a more resilient global food system, leveraging the power of its innovation, and harnessing its global scale and market presence to addressing pressing food security challenges globally.

To learn more, visit gfsi.corteva.com.

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