

Build adaptive food systems by backing agricultural science



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● The effects of climate change are horrific, and the people who understand this best are farmers. I don't think there's a single farmer who will tell you that it is the same as 10 or 20 years ago.

Throughout my career, I had the privilege of speaking with many farmers who shared their stories of how extreme temperatures prevented crops from growing, and how extreme events like floods and drought have harmed crops and reduced yield. The story they told was sobering.

Over the past 60 years, the impact has been so severe that global agricultural crop productivity has declined by over 20% due to climate change and the lack of investment in adaptation research.⁵ To continue to feed the world in the age of the climate emergency, we need to innovate. In fact, agricultural research has been shown to top the list of the most cost-effective ways to end hunger.⁶

Yet, global public expenditure on agricultural R&D, in real terms, has fallen by 10% over the past decade.⁷ This means we are all falling increasingly behind in developing climate adaptation solutions to help farmers and address food insecurity.

Luckily, there are agricultural research centres around the world that stand ready to make up this lost ground, globally, such as the CGIAR and AIRCA; regionally, such as FARA and Fontagro; and nationally. The world's pre-eminent global agricultural research organisation is the CGIAR. I am honoured to have been appointed its next Executive Managing Director (EMD), a role I will take up in December 2023.

Set up by the international community 50 years ago, CGIAR is an unparalleled global network of 14 research centers in regions that

are highly vulnerable to climate change. It has about 10,000 experts managing labs and field stations across 108 countries, working in partnership with over 3,000 organisations.

This gives the CGIAR unrivalled insights, reach, and understanding to develop and deliver innovations which are globally relevant. The CGIAR is the scientific engine of the international agriculture system. Over the past decade, CGIAR centers have collectively:

- Improved nutrition for 20 million people in low-income countries
- Improved climate resilience in farming communities in 21 countries through the establishment of Climate Smart Villages
- Increased rice yield in 13 countries in sub-Saharan Africa by 100%
- Scaled access to improved wheat varieties to almost ½ of the world's wheat areas

This is what CGIAR has achieved with the small and shrinking resources that it is currently given. As the climate crisis deepens, the gap between what is being done and what is required is growing day by day.

That is why it is so important that CGIAR's funding is doubled to \$2 billion per year, so that it can rapidly expand its work to build climate-resilient food systems on every continent.

Reducing greenhouse gas emissions is necessary to reduce the long-term damage from climate change, but we live in a world in which the climate has already changed. Investing in agricultural science is one of the best ways that we can adapt to sequester more GHG and produce healthier food for all, leaving no one behind. ■