

Global development

# Nobel prize winners call for urgent ‘moonshot’ effort to avert global hunger catastrophe

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## More than 150 Nobel and World Food prize laureates sign open letter calling for immediate ramping up of food production

*A rice paddy during a drought in Uttaradit, northern Thailand. Rice production around the world is stagnating and even declining. Photograph: Jack Taylor/The Guardian*

More than 150 Nobel and World Food prize laureates have [signed an open letter](#) calling for “moonshot” efforts to ramp up food production before an impending world hunger catastrophe.

The coalition of some of the world’s greatest living thinkers called for urgent action to prioritise research and technology to solve the “tragic mismatch of global food supply and demand”.

Big bang physicist Robert Woodrow Wilson; Nobel laureate chemist Jennifer Doudna; the Dalai Lama; economist Joseph E Stiglitz; Nasa scientist Cynthia Rosenzweig; Ethiopian-American geneticist Gebisa Ejeta; Akinwumi Adesina, president of the African Development Bank; Wole Soyinka, Nobel prize for literature winner; and black holes Nobel physicist Sir Roger Penrose were among the signatories in the appeal coordinated by Cary Fowler, joint 2024 World [Food](#) prize laureate and US special envoy for global food security.

Citing challenges including the climate crisis, war and market pressures, the coalition called for “planet-friendly” efforts leading to substantial leaps in [food production to feed 9.7 billion people by 2050](#). The plea was for financial and political backing, said agricultural scientist Geoffrey Hawtin, the British co-recipient of last year’s World Food prize.

“It’s almost as if people are burying their head in the sand,” he said. “There’s so many other issues that grab the attention, that this is somehow insidious and creeping up on us and most people don’t give it too much thought. Which is what makes how way off we are from meeting the UN targets on hunger very scary.

“There’s a lot of concern over the rate at which climate change is going on, then this secondary notion that further down the road food is going to be a problem,” he said.

Hawtin pointed to already stagnating and even declining production in rice and wheat around the world, at a time when food production needed to be ramping up by 50% to 70% over the next two decades.

“It’s very easy to defer tackling it, but if we wait until there really is a massive food crisis then we’ll

have 10 to 15 [years] to live in that crisis.

“You can’t solve that sort of problem overnight. From the time you start a research programme to the time it can have a significant impact on production, you’re talking 10 to 15 years.

“It does require political will, international political will. It really needs the focused attention of international institutions.

“A lot of knowledge is there, a lot more is needed. If you look at the possibilities, it’s very encouraging, if you look at the will to make some of those possibilities happen, it’s far less encouraging,” he said.

The world was “not even close” to meeting future needs, the letter said, predicting humanity faced an “even more food insecure, unstable world” by mid-century unless support for innovation was ramped up internationally.

“All the evidence points to an escalating decline in food productivity if the world continues with business as usual,” said Fowler. “With 700 million food-insecure people today, and the global population expected to rise by 1.5 billion by 2050, this leaves humanity facing a grossly unequal and unstable world. We need to channel our best scientific efforts into reversing our current trajectory, or today’s crisis will become tomorrow’s catastrophe.”

The laureates’ letter outlined the climate threat, particularly in Africa, where the population is growing yet yields of the staple maize are forecast to decline.

Factors undermining productivity include soil erosion, land degradation, biodiversity loss, water shortages, conflict and government policies that hold back agricultural innovation.

“The impacts of climate change are already reducing food production around the world, particularly in Africa, which bears little historical responsibility for greenhouse gas emissions yet sees temperatures rising faster than elsewhere,” said Adesina, who received the World Food prize in 2017.

“Temperature rises are expected to be most extreme in countries with already low productivity, compounding existing levels of food insecurity. In low-income countries where productivity needs to almost double by 2050 compared to 1990, the stark reality is that it’s likely to rise by less than half. We have just 25 years to change this.”

The letter cited the most promising scientific breakthroughs and emerging fields of research that could be prioritised as “moonshot” goals. These include improving photosynthesis for wheat and rice and developing cereals that can source nitrogen biologically and grow without fertilisers; alongside boosting research into indigenous crops that tolerate extreme weather conditions, reducing food waste by improving the shelf life of fruits and vegetables, and creating food from microorganisms and fungi.

Mashal Husain, incoming president of the World Food Prize Foundation, said: “This is an ‘Inconvenient Truth’ moment for global hunger. Having the world’s greatest minds unite behind this urgent wake-up call should inspire hope and action. If we can put a man on the moon, we can surely rally the funding, resources and collaboration needed to put enough food on plates here on Earth.”

The letter is due to be discussed at an event in the Senate Committee on Agriculture, Nutrition and Forestry in WashingtonDC on Tuesday, followed by a webinar on Thursday.

Rosenzweig, the 2022 World Food prize laureate, said it was a timely call: “Many if not most food-producing regions are experiencing more frequent extreme events that are damaging not only yields but farmer livelihoods as well.

“We need to launch long-term science-based actions today in order to achieve a world without hunger.”

**Tracy McVeigh**

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**P.S.**

• The Guardian. Tue 14 Jan 2025 07.01 CET:

<https://www.theguardian.com/global-development/2025/jan/14/nobel-world-food-prize-laureates-global-hunger-open-letter-food-production>

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