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More Than 150 Nobel And World Food Prize Laureates Issue Unprecedented Wake-Up Call Over Hunger Tipping Point

A broad coalition of the world's greatest thinkers make urgent plea for 'moonshot' efforts to solve 'tragic mismatch of global food supply and demand' in open letter.

Highlights:

- *153 Nobel and World Food Prize Laureates call on world leaders to prioritize urgent agricultural research to meet food needs of 9.7 billion people by 2050.*
- *Robert Woodrow Wilson, Cary Fowler, Jennifer Doudna, the 14th Dalai Lama, and Joseph E Stiglitz among experts warning of consequences of inaction.*
- *Open letter to be discussed during the "Agricultural R&D Moonshot: Bolstering U.S. National Security" meeting in the U.S. Senate Committee on Agriculture hearing room in Washington, DC.*

Washington, D.C. (January 14, 2025) - More than 150 Nobel and World Food Prize Laureates have made an unprecedented plea for financial and political backing to develop "moonshot" technologies with the greatest chance of averting a hunger catastrophe in the next 25 years.

In an open letter signed by 153 winners of the Nobel Prize and World Food Prize, the signatories warned that the world was "not even close" to meeting future food needs, with an estimated 700 million people going hungry today and an additional 1.5 billion people to feed by 2050. The letter predicted humanity faced an "even more food insecure, unstable world" by mid-century unless the international community ramped up support for the latest research and innovation.

Citing challenges including climate change, conflict and market pressures, it called for "planet-friendly 'moonshot' efforts leading to substantial, not just incremental, leaps in food production for food and nutrition security."

Among those to endorse the letter was **Robert Woodrow Wilson**, who won the 1978 Nobel Prize for Physics for his discovery that supported the big bang theory of creation, **Wole Soyinka**, the first Black African to win the Nobel Prize in Literature, **Sir Roger Penrose**, whose work advanced understanding of black holes, and the **14th Dalai Lama**.

The signatories also included **Joseph E. Stiglitz**, who won the Nobel Prize in Economics in 2001 and, with the Intergovernmental Panel on Climate Change, the 2007 Nobel Peace Prize. **Emmanuelle Charpentier** and **Jennifer Doudna**, who shared the Nobel Prize in Chemistry in 2020 for discovering the CRISPR/Cas9 genetic scissors, also signed the letter.

The appeal was coordinated by **Cary Fowler**, joint 2024 World Food Prize Laureate, who is also the outgoing U.S. Special Envoy for Global Food Security. Other World Food Prize Laureates to join the call were NASA climate scientist **Cynthia Rosenzweig**, Ethiopian-American plant breeder and U.S. National Media of Science Recipient **Gebisa Ejeta** and **Akinwumi Adesina**, president of the African Development Bank.



“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 know that agricultural research and innovation can be a powerful lever, not only for food and nutrition security, but also improved health, livelihoods and economic development. We need to channel our best scientific efforts into reversing our current trajectory, or today's crisis will become tomorrow's catastrophe.”

The Laureates highlighted the threat of climate change to food production, particularly in Africa, where the population is growing fastest yet yields of the staple crop maize are forecast to decline across almost its entire growing area.

Other factors undermining crop productivity include soil erosion and land degradation, biodiversity loss, water shortages, conflict, and policies restricting agricultural innovation.

“The impacts of climate change are already reducing food production around the world, but particularly in Africa, which bears little historical responsibility for greenhouse gas emissions yet sees temperatures rising faster than elsewhere,” said **President Adesina**, who received the World Food Prize in 2017. “Future 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 a list of the most promising scientific breakthroughs and emerging fields of research that could be prioritized to boost food production, despite existing and future challenges. These include improving photosynthesis in staple crops such as wheat and rice to optimize growth; developing cereals that can source nitrogen biologically and grow without fertilizer; as well as boosting research into hardy, nutrition-rich indigenous crops that have been largely overlooked for improvements.

The Laureates also outlined the “moonshot” goals of improving the storage and shelf life of fruits and vegetables, and creating nutrient-rich 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. With the right support, the scientific community can deliver the breakthroughs to prevent catastrophic food insecurity in the next 25 years.”

The letter will be discussed during an event in the Senate Committee on Agriculture Room at the Nation’s Capitol in Washington, D.C. on Tuesday, January 14, followed by a webinar on Thursday, January 16.

“The research-driven green revolution that has dramatically lowered malnutrition across the globe over the past 60 years is losing momentum, with food insecurity once again on the rise, and a looming crisis emerging by 2050. Investment in research, especially in the places that are likely to be affected in the future, will improve food security now, and help alleviate potential future crises,” said **Brian Schmidt**, 2011



Nobel Laureate in Physics. “This is an eminently solvable problem, relatively inexpensive, with a payoff benefitting all of humanity.”

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Notes to editors

The letter will be published online [here](#) on January 14. For an embargoed copy of the letter and full list of signatories, interview requests and further information, contact:

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