GLOBAL BURDEN OF CROP LOSS

Locations  Worldwide

Dates  01/04/2019 - 31/10/2020

Summary  Efforts to reach Sustainable Development Goals in food security, nutrition and livelihoods are being hindered by crop loss. Up 40% of crop yields are lost to pests and disease but the data available to prove and show trends is limited. The Global Burden of Crop Loss project will collect, validate, analyse and disseminate data on the extent and causes of crop loss, with the aim of gathering sufficient and reliable data that can act as evidence to enable prioritisation of research and policy in plant health, improving our ability to predict the impact of emerging diseases.

The problem  Keeping up with growing demand for food, in the context of climate change and increasingly varying growing conditions, is one of the defining challenges of our time. We will need to produce far more food (estimates range between 25 – 100% increase required by 2050), while limiting the environmental impact to ensure enough food is available for all of us for generations to come.

Worldwide, an estimated 20-40% of crop yield is lost to pests and diseases. Losses of staple cereal (rice, wheat, maize) and tuber crops (potatoes and sweet potatoes) directly impact food security and nutrition, while losses in key commodity crops such as banana and coffee have major impacts on both household livelihoods and national economies. Furthermore, the threat of plant pests and diseases are increased by climate fluctuations, hindering progress in several of the UN’s Sustainable Development Goals.

Reducing crop loss will need to be a major component of this, and significant efforts are needed for improved management of pests, including pathogens and weeds.
What we are doing

Despite these clear problems and impacts, data on the scale, scope, and trends of the problem are sparse and outdated.

This initiative will capture and measure the global impacts of crop pests and disease, putting a much-needed spotlight on crop health and ensuring that money and goodwill are directed towards the real, evidence-based, causes of crop loss. With accurate and relevant information, decision makers can allocate resources and systematically develop investment in, and capacity of, plant health systems. Overall, this project has the potential to transform global agriculture and serve as a cornerstone for agricultural policy decision-making.

The Knowledge and Data team at CABI, the universities of York and Exeter and Luma Consulting were awarded a Bill and Melinda Gates Foundation, Grand Challenges, Call to Action grant. This seed funding, covering 18 months, will enable the team to analyse the feasibility of delivering the vision for the Global Burden of Crop Loss. The team will begin by investigating the existing data landscape, collaborative networks, and analytical methods to deliver the Global Burden of Crop Loss initiative. To deliver this analysis, we will begin to build the collaborative network and define a proposed scope, approach, and structure for the delivery of the first iteration in close partnership with stakeholders, contributors and other key players.

Results so far

2020 has been declared the International Year of Plant Health by the UN which is when we aim to formally launch the Global Burden of Crop Loss initiative.

In October 2020, the initial findings will be summarised to provide a clear vision of what will be delivered in the next phase (2020-2025) and a larger funding proposal will be drafted for submission to cover the second phase of the project.

Donors

Bill and Melinda Gates Foundation

Partners

Luma Consulting, Sarah Gurr, University of Exeter, Katherine Denby, University of York & N8 Agrifood

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https://www.cabi.org/what-we-do/cabi-projects/