Global Burden of Crop Loss

Every year, up to **40% of crops are lost** before they are even harvested. Crop loss impacts on food security, farmer livelihoods and economic stability. However, the problem is poorly understood, preventing effective action to reduce losses.

The **Global Burden of Crop Loss** initiative aims to bridge this knowledge gap by providing **trusted, actionable estimates** of crop losses to **inform decisions** on improving agricultural output and food security globally.

The problem

Meeting the **growing demand for food** without increasing the environmental impact of agriculture continues to be a major challenge. As the global population is expected to rise to nearly 10 billion by 2050, there is ever greater need to produce significantly more food. However, crop productivity is increasingly at risk from **pests, plant diseases**, and the effects of **climate change**.

With one-third of **global emissions** linked to agriculture – and the biggest individual contribution coming from forests being cleared and converted into farms – losing less of the crops sown on existing agricultural land will also help minimize deforestation, the associated emissions and biodiversity loss.

The **lack of information on crop loss** makes it difficult for policymakers, researchers, funders and farmers to take targeted action. Data on losses are often outdated, lacking in detail, not shared, or missing. To reduce crop losses, decision-makers need to better understand the **scale, magnitude** and the **factors** contributing to these losses.

Our approach

We support global food security by providing **reliable estimates** on the scale and burden of crop losses across different regions and crop types. By equipping decision-makers with **accurate and actionable insights**, we enable them to take informed action to protect yields and safeguard food security.

Improving **evidence-based decision-making** on plant health will reduce and prevent crop losses, help agricultural systems to be more resilient against the impacts of climate change, and improve food security and livelihoods.

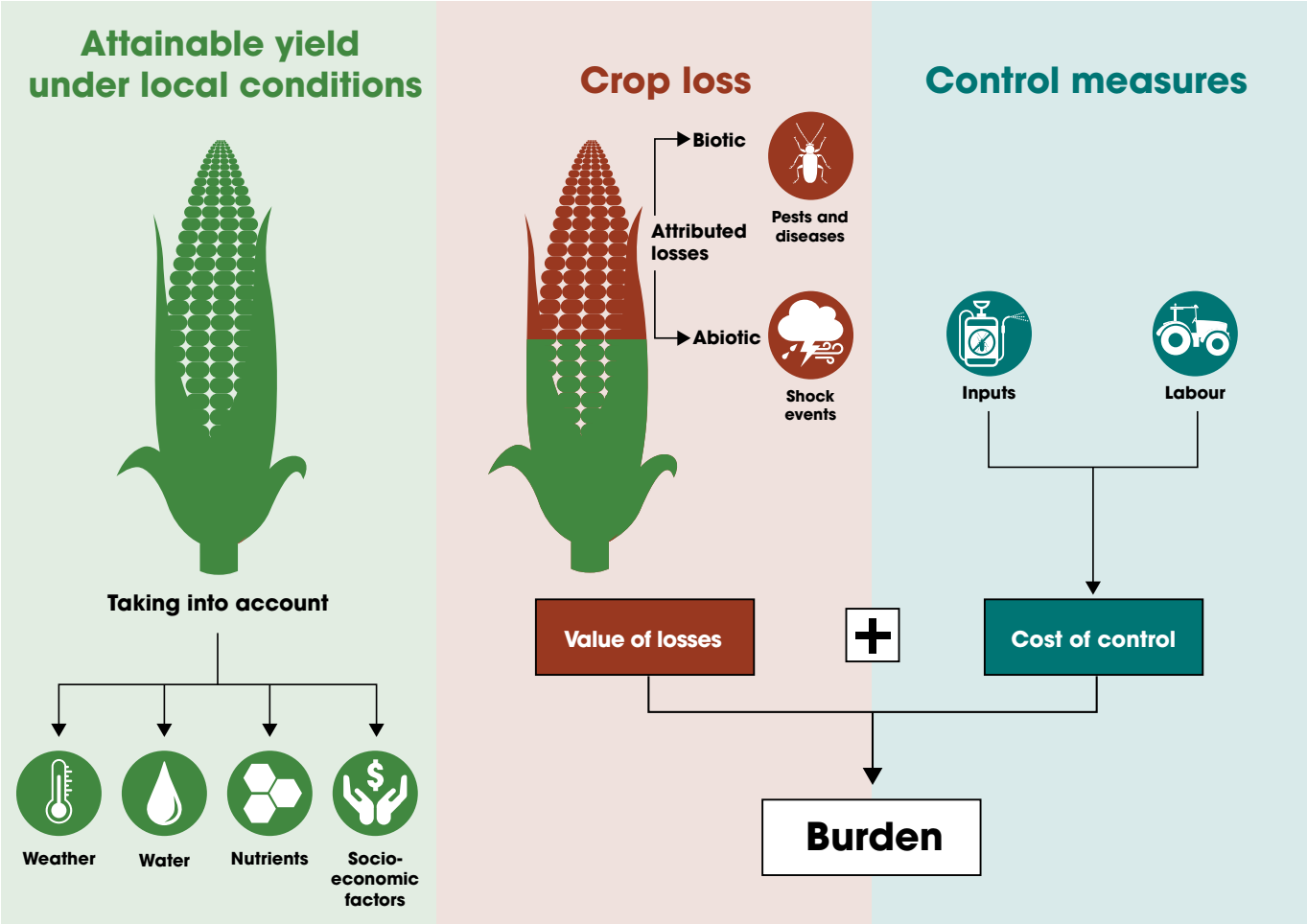
To strengthen our impact, we will **actively engage** with government, multilateral, research, donor and private sector organizations to understand their data needs and support them to use evidence in decision-making to **reduce crop loss**.

How we measure the burden of crop loss

We define **crop loss** as the difference between the **Attainable Yield in Context** (the highest possible yield under local conditions) and the actual production, as measured by FAOSTAT.

The **burden** of crop loss is an economic metric representing the cost to society of these losses. It is calculated as the total **value of losses** from biotic (pests, diseases) and abiotic (shock events) causes, plus the **cost of control** measures undertaken to mitigate losses, such as the use of crop protection products and labour.

By understanding the scope of crop loss and the cost of control, decision-makers can quantify the burden of crop loss and implement **targeted solutions**.



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