GLOBAL YIELD GAP ATLAS

An agronomic database platform with local and global relevance to support your decision on yield optimisation

Figure 1: The world's overview of the yield gap for rainfed maize with spatial resolution at 'climate zones' level (see also Figure 3 for the map settings and legend)

WHAT IS GLOBAL YIELD GAP ATLAS (GYGA)?

Global Yield Gap Atlas (GYGA - www.yieldgap.org) offers high-quality and locally relevant data on yield gap and potential, water productivity, nutrient requirement, and other agronomic data such as weather, soil, and crop management system. GYGA has now coverage of up to 13 food crops across 70 countries and six continents with the possibility of expansion.

Since 2011, the platform has achieved almost 25,000 data downloads by private/public/non-profit sectors including agricultural input companies (e.g. seeds, agrochemicals, biostimulants), consultancy companies, financial agencies, governments, donors, research institutions, and NGOs as reference points for strategic decision making and research on yield optimisation.

What makes GYGA unique in comparison to other data sources?

1. Offers high-quality and locally relevant data that are collected following a "bottom-up" global protocol to organise soil, climate, and cropping system data. Learn more about our CYCA protocol.

WHAT ARE THE POTENTIAL APPLICATIONS OF GYGA?

1. Market identification and selection of priority areas for investment, field trials, or scaling out of products.
2. Impact assessment of agricultural investment by measuring progress of indicators (e.g. yield gap, water productivity).
3. Locally relevant data for crop modelling
4. R&D and product development
5. Foundation for research on how to close yield gaps and analysis on food security, land use, and climate change.
2. Follow a leveled approach for data source selection with a preference for use of primary data and the need for local knowledge of agronomic practices by collaborating with leading agronomists in the countries.

3. Offers data that is available at different spatial levels: a) Location, b) Climate zones, and c) National. Check out CYCA Map Viewer.

4. CYCA has established scientific credibility since it was founded as its methods and applications have triggered hundreds of well-cited scientific publications. Learn more about CYCA publications.

Want to extend GYGA’s benefits to your organisation? Learn more about CYCA license and sponsorship subscription. Become one of the first 15 sponsors and annual licensees to get your 10% early bird discount! Our current sponsors and annual licensees include Bill & Melinda Gates Foundation, Yara, and a number of world’s leading agro-chemicals, biostimulant, renewable energy, and consultancy companies.

Get on board together on our journey towards a climate-positive food future through data driven agronomy! Got questions or see scope of partnership? Contact us at gyga_support@wur.nl.

Figure 2: Technology Extrapolation Domains (TEDs) is a tool developed by the GYGA team that delineates geographic domains based on similar climate and soil (currently available for USA and Sub-Saharan Africa). Learn more here.

Figure 3: Map settings of yield gap for rainfed maize with spatial resolution at ‘climate zones’ level (see Figure 1 above).

Figure 4: Minimum nitrogen input requirement for a target yield of 80% of yield potential for rainfed maize in Europe (kg N/harvested ha). Learn more here.