



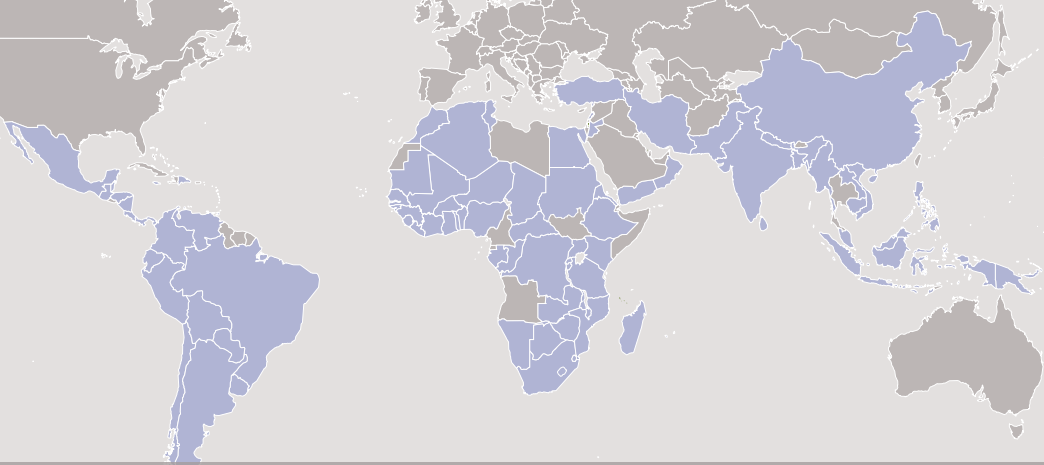
ASTI
led by **IFPRI**

AGRICULTURAL SCIENCE & TECHNOLOGY INDICATORS

Open-access data and analysis on agricultural research investment and capacity in low- and middle-income countries



ASTI compiles, analyzes, and publishes agricultural R&D data relating to institutional developments, investments, and human resource capacity in low- and middle-income countries. The program functions through collaborative alliances with national R&D agencies, regional coordinating bodies, and international institutions. ASTI is widely recognized as the authoritative source of information on the status and direction of agricultural R&D systems in developing countries.



■ ASTI country coverage



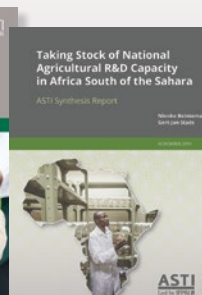
ASTI INDICATORS

ASTI is active in nearly 80 countries of Africa, Asia, and Latin America and the Caribbean. ASTI collects primary data through national surveys in close collaboration with its national institutional partners. Surveys, which are distributed to all agencies known to conduct agricultural research in a given country, focus on the following categories of information:

- ▶ Institutional information, such as the location and affiliation of agricultural R&D agencies.
- ▶ Human resource information, such as the number of researchers and support staff employed, together with their ages, gender, educational disciplines and qualifications, and level of seniority.
- ▶ Financial information, such as funding levels and sources, and spending levels and allocations.
- ▶ Research focus, including details of the coverage of commodities.
- ▶ R&D outputs, such as the number of scientific publications and the release of new crop varieties and agricultural technologies.
- ▶ Numbers of students enrolled and graduated at agricultural higher education agencies, degree programs offered.
- ▶ Qualitative information on the status of national agricultural R&D systems and the associated institutional and policy environment.

ASTI'S OUTPUTS

- ▶ Downloadable datasets on agricultural research expenditures and human resource capacity.
- ▶ Interactive data tools accessible via ASTI's website; available in English, French, and Spanish; and including tools that interface with partner websites.
- ▶ Multilingual publications focusing on the status of agricultural R&D institutions at national, regional, and global levels.
- ▶ Analytical reports on the efficiency of agricultural R&D, productivity trends, and impact of R&D investments.
- ▶ Seminars, presentations, and media outreach.



THE VALUE OF ASTI

Evidence demonstrates that long-term investments in agricultural research have significantly enhanced agricultural productivity around the world. By raising the quantity and quality of agricultural outputs, agricultural technologies and varieties developed through agricultural research have led to higher incomes, greater food security, and better nutrition. It is not surprising, therefore, that the United Nation's post-2015 development agenda stresses the key role of R&D in increasing food production in the face of rapid population growth, climate change, and volatile food prices.

Nevertheless, in spite of well-documented evidence of the payoffs to investing in agricultural R&D, many developing countries continue to underinvest. One explanation is the length of time required to reap the rewards of investments

in research—which can typically involve decades, not just years. Agricultural R&D requires the long-term commitment of sufficient and sustained levels of funding, appropriate levels and allocations of research staff, and the necessary supporting institutional infrastructure.

Given the competing demands on national budgets, shorter-term goals often take priority over longer-term agricultural R&D investments. This is why quantitative data are essential to an informed decisionmaking process. Agricultural R&D stakeholders require such data to analyze investment and capacity trends, identify key gaps, set future priorities, promote efficient resource use, and ensure effective coordination and coherence of agricultural research initiatives. R&D indicators are also vital in assessing the contribution of agricultural R&D to development goals, such as agricultural and economic growth, food security, poverty reduction, and climate change mitigation.

ENHANCED OPEN-SOURCE, INTERACTIVE DATA TOOLS AVAILABLE ONLINE > <http://www.asti.cgiar.org>

ASTI's interactive country pages allow users to access detailed investment and human resource trends in agricultural research, and download factsheets and other information.

ASTI's benchmarking tool allows users to rank and compare agricultural research investment and capacity levels across countries.

ASTI's data download tool allows users to explore in-depth datasets on agricultural research spending and staffing in numerous low- and middle-income countries and to filter the data by country and indicator.

ASTI'S IMPACT

ASTI outputs are frequently referenced in high-level meetings and reports. ASTI's most recent set of data and outputs for Africa are playing an important role in informing the discussions surrounding the Comprehensive Africa Agriculture Development Programme (CAADP) and the Science Agenda for Agriculture in Africa. A 2014 external review concluded that ASTI data and analyses have provided an effective platform allowing policymakers to track countries' agricultural R&D progress over time. The findings and outputs of ASTI's work have important policy relevance at national, regional, and international levels and are widely recognized as the most authoritative source of information on support for and the structure of agricultural R&D worldwide. In addition, an increasing number of countries use ASTI data as a tool to advocate for increased R&D funding, raising the retirement age of scientists, developing training opportunities, and more. ASTI data has also facilitated improvements in the monitoring and evaluation systems of many agricultural R&D institutes in Africa.

ASTI'S 2015–2018 WORKPLAN

- ▶ Release country factsheets, data and analysis tools, and a regional report focusing on Latin America and Caribbean (2015).
- ▶ Conduct two new rounds of data collection in Africa south of the Sahara, resulting in new country factsheets, online datasets, and a regional report (2015, 2017).
- ▶ Conduct two new rounds of data collection in South Asia, resulting in new country factsheets, online datasets, and a regional report (2016, 2018).
- ▶ Prepare in-depth national and regional assessments of the efficiency of agricultural R&D and innovation systems, cross-country trends in agricultural productivity, and the impact of agricultural R&D investments in Africa, Latin America, and Asia (2015–2018).
- ▶ Conduct outreach activities, establishing advocacy partnerships, and developing a dissemination strategy to enhance the uptake of data and analysis in Africa south of the Sahara and South Asia (2016–2018).
- ▶ Release a new set of interactive online tools, and develop additional tools to enable ASTI's website to interface with partner websites (2015–2016).
- ▶ Secure funding to maintain datasets for Latin America and the Caribbean and West Asia and North Africa, and to update datasets for Southeast Asia (2015–2018).



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