Public Agriculture R&D Investments
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WHAT ARE THESE MAPS TELLING US?
Growth in public agriculture research and development (R&D) spending levels in Africa south of the Sahara (SSA) varied widely from 2008 to 2011 (Map 1). Continent-wide growth was driven by a handful of larger countries. However, 13 of the 39 countries for which Agricultural Science and Technology Indicators (ASTI) data are available experienced negative annual growth in public agricultural R&D spending during 2008/09–2011. Another way of comparing commitment to public agricultural R&D investment across countries is to measure intensity (Map 2) — that is, total public agricultural R&D spending as a percentage of agricultural output (AgGDP). Overall investment levels in most countries are still well below the levels required to sustain agricultural R&D needs. In 2011, SSA as a whole invested 0.51 percent of AgGDP on average. Just 10 of the 39 countries met the investment target of one percent of AgGDP set by the African Union’s New Partnership for Africa’s Development (NEPAD). Some of the smallest countries in Africa, such as Lesotho, Swaziland, Burundi, Eritrea, and Sierra Leone, have such low and declining levels of investment that the effectiveness of their national agricultural R&D is questionable. In addition, compared with other developing regions, agricultural R&D is highly dependent on funding from donor organizations and development banks such as the World Bank (Figure 1). This type of funding has been highly volatile over time, leaving research programs vulnerable and making long-term planning difficult.

WHY IS THIS IMPORTANT?
A closer look at growth in public agricultural R&D investment levels over time reveals important cross-country differences and challenges. While the intensity ratio of investment (measured as a share of AgGDP) provides a relative measure of a country’s commitment to agricultural R&D, monitoring investments is also key to understanding agriculture R&D’s contribution to agricultural growth. Research managers and policymakers can use agricultural R&D spending information to formulate policies and make decisions about strategic planning, priority setting, monitoring, and evaluation. The data are also needed to assess the progress of the Comprehensive Africa Agriculture Development Program (CAADP), which is designed to boost investments in agricultural growth through research, extension, education, and training.

1 Due to scale, not all ASTI countries are visible on the maps.

FIGURE 1 Donor funding as a share of total agriculture R&D funding, 2011

Source: ASTI 2013.
Note: Donor funding includes loans from development banks and funding from subregional organizations. Figure excludes countries with donor shares of less than 5 percent.

WHAT ABOUT THE UNDERLYING DATA?
The data are from primary surveys of 39 countries in SSA conducted during 2012–2013 by ASTI and national partners. ASTI provides comprehensive datasets on agricultural R&D investment and capacity trends and institutional changes in low- and middle-income countries. The datasets are updated at regular intervals and accessible online.

WHERE CAN I LEARN MORE?
ASTI datasets, publications, and other outputs by country: www.asti.cgiar.org/countries
ASTI methodology and data collection procedures: www.asti.cgiar.org/methodology
MAP 1 Change in public agriculture R&D spending levels, 2008–2011

MAP 2 Intensity of agriculture R&D spending, 2011

Notes: AgGDP=agricultural output. Intensity of agricultural R&D spending=public agricultural R&D spending per $100 of agricultural output.