**BOTSWANA**

**KEY INDICATORS, 2000–2011**

<table>
<thead>
<tr>
<th>Total Public Agricultural Research Spending</th>
<th>2000</th>
<th>2008</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pula (million constant 2005 prices)</td>
<td>45.4</td>
<td>58.1</td>
<td>42.4</td>
</tr>
<tr>
<td>PPP dollars (million constant 2005 prices)</td>
<td>18.8</td>
<td>24.0</td>
<td>17.5</td>
</tr>
<tr>
<td>Overall Growth</td>
<td></td>
<td>28%</td>
<td>–27%</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Total Number of Public Agricultural Researchers</th>
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<tbody>
<tr>
<td>Full-time equivalents (FTEs)</td>
</tr>
<tr>
<td>Overall Growth</td>
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</tbody>
</table>

<table>
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<tr>
<th>Agricultural Research Intensity</th>
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<tbody>
<tr>
<td>Spending as a share of agricultural GDP</td>
</tr>
<tr>
<td>FTE researchers per 100,000 farmers</td>
</tr>
</tbody>
</table>

Note: Acronyms, definitions, and an overview of agricultural R&D agencies are available on page 2.

**INSTITUTIONAL PROFILE, 2011**

- **BCA** 24%
- **DAR** 49%
- **OTHER GOVERNMENT** 27%

**RESEARCH FOCUS, 2011**

- **MAJOR CROPS** 35%
- **CROPS** 45%
- **NATURAL RESOURCES** 5%
- **LIVESTOCK** 14%
- **OTHER** 14%

**RESEARCHER PROFILE, 2011**

- **PhD** 71%
- **MSc** 29%

**NUMBER BY QUALIFICATION (FTEs)**

- **PhD** 24.4
- **MSc** 35.3
- **BSc** 64.1

**SHARE BY AGE GROUP (years)**

- > 60 2%
- 51–60 14%
- 41–50 26%
- 31–40 51%
- < 31 7%

**Notes:** Major crops include those that are the focus of at least 5 percent of all crop researchers; 16 percent of all crop researchers focused on a wide variety of other crops.

**FINANCIAL RESOURCES, 2011**

<table>
<thead>
<tr>
<th>Spending Allocation</th>
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</thead>
<tbody>
<tr>
<td>Salaries</td>
</tr>
<tr>
<td>Operating and program costs</td>
</tr>
<tr>
<td>Capital investments</td>
</tr>
</tbody>
</table>

**Funding Sources**

- **Government** 91%
- **Sale of goods and services** 9%

Note: Shares are based on data for DAR only.

Agricultural R&D in Botswana is almost entirely funded by the government. Spending on operating and program costs increased significantly during 2005–2007, but contracted again from 2008, when government funding to many public-sector agencies was cut due to spiraling inflation.

Botswana invests a relatively high share of its agricultural GDP in agricultural research. Nevertheless, such a high intensity ratio is not uncommon in countries with small populations and relatively high per capita incomes. Small countries are not able to benefit from economies of scale to the degree that larger countries can, so basic research infrastructure and staffing constitute greater shares of investment.
OVERVIEW OF BOTSWANA'S AGRICULTURAL RESEARCH AGENCIES

Four agencies conduct agricultural R&D in Botswana. The main agency, DAR (employing 61 FTEs in 2011), accounts for half of the country’s researchers and holds a broad mandate covering crop and livestock research. DAR is structured around three divisions focusing on arable research, animal production and range research, and support services. The government agency NVL (29 FTEs) conducts livestock research, whereas NFTRC (4 FTEs) focuses primarily on food technology. The higher education agency BCA (30 FTEs) conducts crop, livestock, natural resources, and socioeconomic research. One nonprofit agency, VPRD, conducted some agricultural research in the past, but lacked research funding during 2010 and 2011. Research conducted by the private-for-profit sector in Botswana is minimal.

4 AGENCIES

Government 3
Higher education 1

ACRONYMS USED IN THIS FACTSHEET

BCA      Botswana College of Agriculture
DAR      Department of Agricultural Research
FTE(s)   Full-time equivalent (researchers)
NFTRC   National Food Technology Research Centre
NVL      National Veterinary Laboratory
PPP(s)   Purchasing power parity (exchange rates)
R&D      Research and development
VPRD    Veld Products Research and Development

ABOUT ASTI, IFPRI, AND DAR

Working through collaborative alliances with numerous national and regional R&D agencies and international institutions, Agricultural Science and Technology Indicators (ASTI) is a comprehensive and trusted source of information on agricultural R&D systems across the developing world. ASTI is led by the International Food Policy Research Institute (IFPRI), which—as a CGIAR member—provides evidence-based policy solutions to sustainably end hunger and malnutrition and reduce poverty. The Department of Agricultural Research (DAR) is Botswana’s principal agricultural R&D agency. It falls under the administrative coordination of the Ministry of Agriculture. In addition to holding a broad mandate covering crop and livestock management research, DAR provides research support services in seed production and certification; soil, plant, and feed analysis; and genetic resources conservation.

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