

LESOTHO

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KEY INDICATORS, 2009–2011

Total Public Agricultural Research Spending	2009		2011
Maloti (million constant 2005 prices)	9.4		6.2
PPP dollars (million constant 2005 prices)	2.7		1.8
Overall Growth		-34%	
Total Number of Public Agricultural Researchers			
Full-time equivalents (FTEs)	41.7		41.1
Overall Growth		-1%	
Agricultural Research Intensity			
Spending as a share of agricultural GDP	1.28%		0.68%
FTE researchers per 100,000 farmers	11.58		11.26

Note: Acronyms, definitions, and an overview of agricultural R&D agencies are available on page 4.

▶ The national government provided almost all of the funding for agricultural R&D between 2009 and 2011; donor funding, although minimal, is still an important source of support for actual research activities.

▶ From 2009 to 2011, agricultural R&D spending contracted by 34 percent as a result of declining government funding to DAR, the main agricultural research agency in the country.

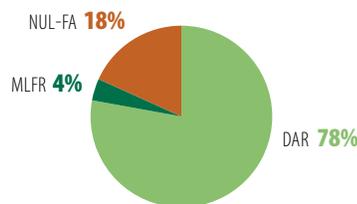
▶ The share of agricultural researchers qualified to the PhD-degree level in Lesotho, at only 9 percent, is one of the lowest in Africa; lack of funding and locally provided PhD programs constrain staff development.

FINANCIAL RESOURCES, 2011

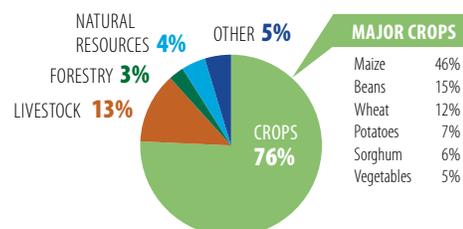
Spending Allocation	
Salaries	96%
Operating and program costs	4%
Capital investments	0%
Funding Sources	
Government	95%
Donors and development banks	5%

Note: Due to lack of availability, shares are based on data for DAR only.

INSTITUTIONAL PROFILE, 2011



RESEARCH FOCUS, 2011



Notes: Major crops include those that are the focus of at least 5 percent of all crop researchers; 9 percent of crop researchers focused on a wide variety of other crops.

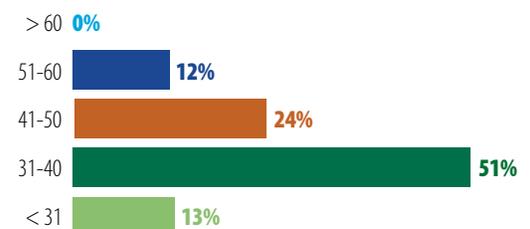
RESEARCHER PROFILE, 2011



Number by qualification (FTEs)



Share by age group (years)



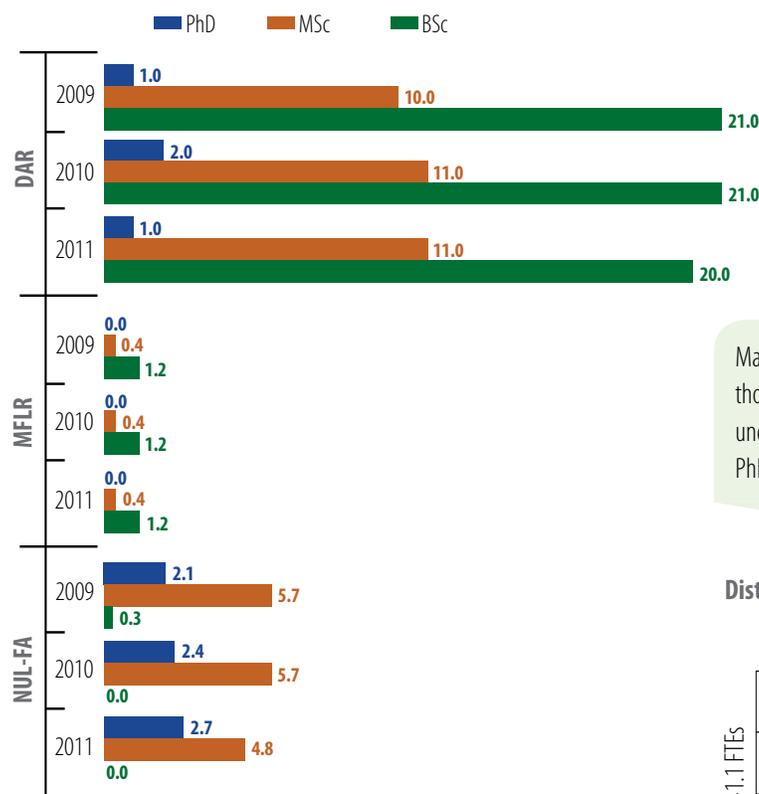
CHALLENGE

- ▶ Since the early 1990s when donor funding became scarce, DAR has lost many of its senior, experienced researchers, rendering it difficult for the department to maintain a critical mass of high caliber professionals to effectively generate and disseminate research outputs and mentor junior scientists. High staff turnover stems from weak remuneration packages, lack of career opportunities and other incentives, and low job satisfaction due to inadequate resources to undertake meaningful research.

POLICY OPTIONS

- ▶ Attaining (semi)autonomous status, a current trend in many countries, could help DAR to diversify and increase its funding base, and allow it to build a cadre of competent researchers and ensure the continuity of research. Another critical area needing urgent attention is the development of a strong research policy agenda, and acquiring and sustaining the necessary expertise to support that agenda. Finally, experienced researchers who have recently retired or are nearing retirement could be a valuable resource if employed as contract-based consultants to train and mentor junior scientists over a transition period.

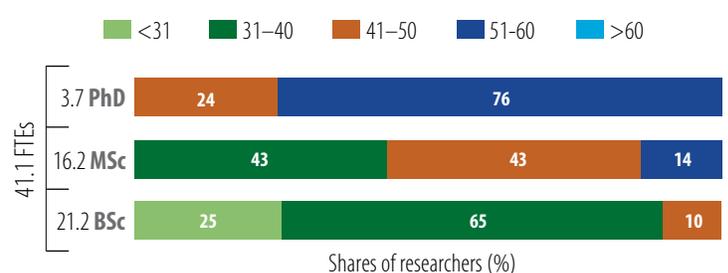
Total number of researchers by qualification level, 2009–2011 (FTEs)



Only 9 percent of the country's agricultural researchers held PhD degrees in 2011. The main research agency, DAR, only employed one PhD-qualified researcher that year, whereas NUL-FA employed the remaining three. Lesotho has no local PhD programs in agricultural sciences, although NUL-FA does offer agriculture and related BSc- and MSc-degree programs with full government sponsorship.

Many of DAR's researchers are young and relatively inexperienced: 90 percent of those holding BSc degrees and 43 percent of those holding MSc degrees were under the age of 41 in 2011. In contrast, three of the four FTE researchers holding PhDs were over the age of 50.

Distribution of researchers by age and qualification level, 2011



CROSS-COUNTRY COMPARISONS OF KEY INDICATORS

	Total number of researchers, 2011 (FTEs)	Growth in number of researchers, 2008–2011	Share of PhD researchers, 2011 (FTEs)
Lesotho	41.1	-1%^a	9%
Botswana	123.8	26%	20%
Namibia	89.4	10%	13%
Swaziland	27.1	-1% ^a	45%

^a For Lesotho and Swaziland, this growth is based on data for the 2009–2011 period.

CHALLENGE

- ▶ DAR's budget allocation is generally only sufficient to cover the cost of staff salaries, leaving very little funding for day-to-day operating and program expenses, or investment in capital infrastructure—both of which are fundamental to the conduct of effective research. Furthermore, disbursement does not correspond with the agricultural year, which undermines efficient research planning.

OBSERVATION

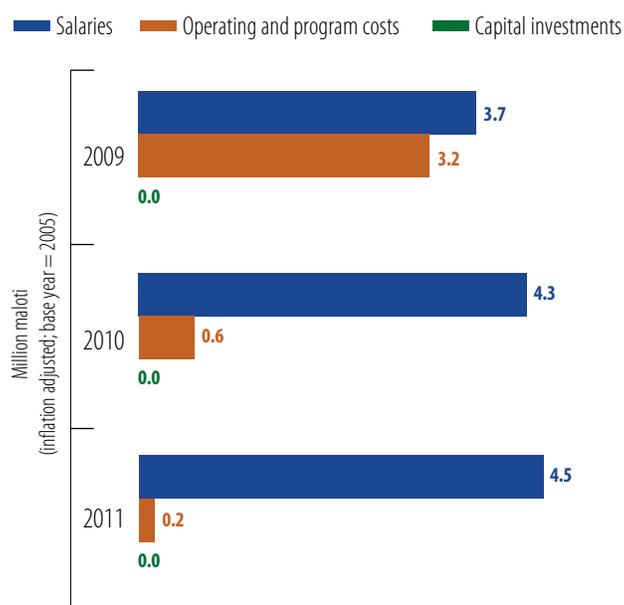
- ▶ DAR's research activities depend on small research grants sought through its alliances with other research institutes in the SADC region and CGIAR centers. Competitive regional grants and donor calls for proposals remain a potential source of funding, but DAR has been challenged in competing with larger institutions and navigating bureaucratic and donor requirements.

▶ RECENT POLICY DEVELOPMENTS

Agricultural productivity growth has significant potential to reduce rural poverty. Related government policies, however, tend to focus on short-term investments, such as agricultural subsidies. Long-term results can only be achieved with sustained investment in agricultural research to develop and adapt the technologies needed to support farmers' transition from subsistence to market-oriented agriculture. Numerous policy developments have been established or initiated to address some of the challenges to agricultural research in Lesotho:

- Several national forums and recent policy documents (such as the CAADP investment plan) have proposed that DAR be given semiautonomous status, which would provide DAR with greater flexibility in financial and human resource procedures.
- The government has recently facilitated salary increases for government-based senior researchers, which reduced the salary gap with universities.
- A proposal to give Lesotho Agricultural College semiautonomous status as an agricultural training institute has been formally approved.
- The curriculum at Lesotho's higher education agencies is being revised to offer degrees in specialized fields, such as genetic resources and soil science.
- Some government funds have been allocated to rehabilitate and upgrade DAR's soil and plant protection agencies to improve research quality and service delivery.
- Pending phytosanitary and seed policy has recently gained government support, and external funding is facilitating its path toward approval.

DAR's spending by cost categories, 2009–2011



Salary-related expenses rose slightly during 2009–2011; however, overall spending dropped considerably during this time due to significant declines in operating and program costs. Capital investments were nonexistent during this period.

CROSS-COUNTRY COMPARISONS OF KEY INDICATORS *continued*

	Total spending, 2011 (million 2005 PPP dollars)	Overall spending growth, 2008–2011	Spending as a share of AgGDP, 2011
Lesotho	1.8	-34%^b	0.68%
Botswana	17.5	-27%	2.44%
Namibia	43.1	69%	4.27%
Swaziland	4.7	-22% ^b	1.43%

^b For Lesotho and Swaziland, this growth is based on data for the 2009–2011 period.

OVERVIEW OF LESOTHO'S AGRICULTURAL RESEARCH AGENCIES

Three agencies conduct agricultural R&D in Lesotho. The main government agency, DAR (employing 32 FTEs in 2011), accounts for the majority of the country's agricultural researchers. DAR is administered by MAFS, has a broad mandate to conduct crop and livestock research, and comprises one main research station and four regional research stations focusing on the country's various agroecological zones. The two remaining entities that conduct agriculture-related research in Lesotho are MFLR (2 FTEs), which is a government ministry focusing on forestry and related issues, and the higher education agency, NUL-FA (8 FTEs), which conducts crop and livestock research. Research conducted by the nonprofit and private-for-profit sectors in Lesotho is minimal.



 For a complete list of the agencies included in ASTI's dataset for Lesotho, visit www.asti.cgiar.org/lesotho.

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)**, which falls under the Ministry of Agriculture and Food Security, is Lesotho's principal agricultural research agency; DAR focuses on crop and livestock research.

ASTI/IFPRI and DAR gratefully acknowledge participating agricultural R&D agencies for their contributions to the data collection and preparation of this country factsheet. ASTI also thanks the Bill and Melinda Gates Foundation for its generous support of ASTI's work in Africa south of the Sahara. This factsheet has been prepared as an ASTI output and has not been peer reviewed; any opinions are those of the authors and do not necessarily reflect the policies or opinions of IFPRI or DAR.

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ASTI DATA PROCEDURES AND METHODOLOGIES

- ▶ The **data underlying this fact sheet** were predominantly derived through primary surveys, although some data were drawn from secondary sources or were estimated.
- ▶ **Public agricultural research** includes research conducted by government agencies, higher education agencies, and nonprofit institutions.
- ▶ ASTI bases its calculations of human resource and financial data on **full-time equivalent (FTE) researchers**, which take into account the proportion of time staff actually spend on research compared with other activities.
- ▶ ASTI presents its financial data in 2005 local currencies and **2005 purchasing power parity (PPP) dollars**. PPPs reflect the relative purchasing power of currencies more effectively than do standard exchange rates because they compare prices of a broader range of local—as opposed to internationally traded—goods and services.
- ▶ ASTI estimates the **higher education sector's research expenditures** because it is not possible to isolate them from the sector's other expenditures.
- ▶ Note that, due to **decimal rounding**, the percentages presented can sum to more than 100.

 For more information on ASTI's data procedures and methodology, visit www.asti.cgiar.org/methodology; for more information on agricultural R&D in Lesotho, visit www.asti.cgiar.org/lesotho.

ACRONYMS USED IN THIS FACTSHEET

CAADP	Comprehensive Africa Agriculture Development Programme
DAR	Department of Agricultural Research
FTE(s)	Full-time equivalent (researchers)
GDP	Gross domestic product
MAFS	Ministry of Agriculture and Food Security
MFLR	Ministry of Forestry and Land Reclamation
NUL-FA	National University of Lesotho—Faculty of Agriculture
PPP(s)	Purchasing power parity (exchange rates)
R&D	Research and development
SADC	Southern Africa Development Community