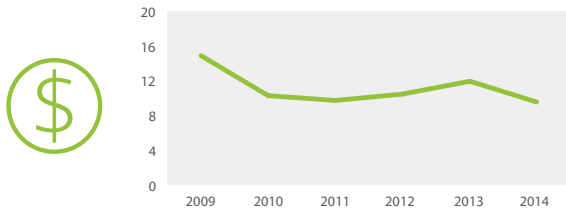


LESOTHO

Nienke Beintema, Maleoa Mohloboli, and Sandra Perez

AGRICULTURAL RESEARCH SPENDING



Million maloti (2011 constant prices)

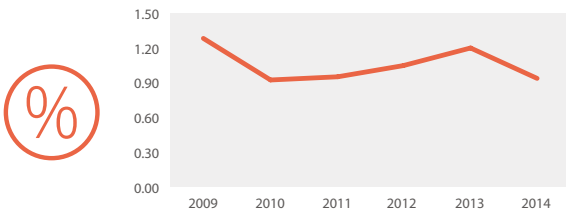
9.5

Million PPP dollars (2011 constant prices)

2.4

	LESOTHO	BOTSWANA	NAMIBIA	SWAZILAND
Million maloti (2011 constant prices)	9.5			
Million PPP dollars (2011 constant prices)	2.4	21.3	38.8	6.9

SPENDING INTENSITY

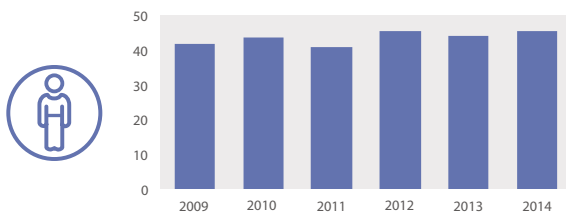


Agricultural research spending as a share of AgGDP

0.94%

	LESOTHO	BOTSWANA	NAMIBIA	SWAZILAND
Agricultural research spending as a share of AgGDP	0.94%	2.92%	3.09%	0.93%

AGRICULTURAL RESEARCHERS



Full-time equivalents

45.6

Share of researchers with MSc and PhD degrees

46%

	LESOTHO	BOTSWANA	NAMIBIA	SWAZILAND
Full-time equivalents	45.6	137.8	99.7	27.4
Share of researchers with MSc and PhD degrees	46%	54%	58%	90%

Notes: Data above are for 2014. Research conducted by the private for-profit sector is excluded from this factsheet due to lack of available data. Information on access to further resources, data procedures and methodologies, and acronyms and definitions are provided on Page 4. See www.asti.cgiar.org/Lesotho/directory for an overview of Lesotho's agricultural R&D agencies.



Declining research spending

Lesotho's agricultural research spending contracted by one-third during 2009–2014 in inflation-adjusted terms. This was the result of declining government support to DAR—the country's main agricultural research agency—and the cessation of research activities at MFLR in 2012. Despite declining spending, Lesotho invested 0.94 percent of its AgGDP in agricultural research—in line with the 1 percent minimum level recommended by the African Union and the United Nations; this, however, reflects Lesotho's small size, rather than a high commitment to agricultural R&D.



Lack of funding diversity

Over time, DAR has been almost entirely funded by the Government of Lesotho, but allocations have generally only covered the cost of staff salaries. Funding for the department's research activities has been derived through small research grants and alliances with regional research agencies and CGIAR centers. Since 2014, however, the Government's Agricultural Subsidy Program funded the construction and rehabilitation of laboratories, as well as the procurement of new equipment, at DAR.



Capacity strengthening needed

Lesotho, and especially DAR, has insufficient human resource capacity in agricultural research. As of 2014, only 12 percent of the country's agricultural researchers were qualified to the PhD level. Moreover, staff retention is low based on poor remuneration packages and other incentives. DAR's pool of researchers are young and inexperienced, and training and mentoring opportunities are limited. Resolving this issue is a priority at DAR, and some improvements have been made in recent years.

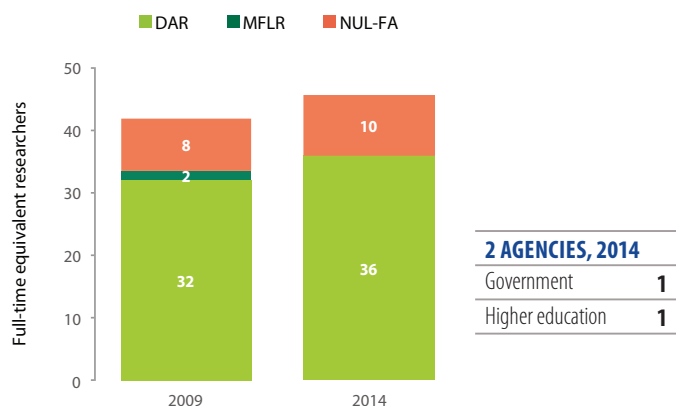


Tackling the many challenges

Lesotho needs a strong and innovative agricultural R&D system to address the many challenges confronting its agricultural sector. In July 2015, the Ministry of Agriculture and Food Security committed to a two-year collaborative project with FAO to strengthen the country's research and extension capacity and enable it to undertake relevant, effective, and efficient agricultural research in support of farmers' needs.

Institutional composition of Lesotho's agricultural research

As of 2014, just two agencies conducted agricultural research in Lesotho. DAR, the only government agency, accounted about three-quarters of the country's total number of agricultural researchers. Researcher numbers at NUL-FA remained still small overall, but has been increasing over the years.



Note: MFLR discontinued its research activities in 2012.

2 AGENCIES, 2014

Government	1
Higher education	1

Lesotho's share of female researchers

Female participation in agricultural research in Lesotho is among the highest in Africa. Overall, the share of female researchers remained constant during 2011–2014, and it should be noted that shifts in shares by qualification level and age bracket only represent small numbers of FTEs.



By qualification level, 2014

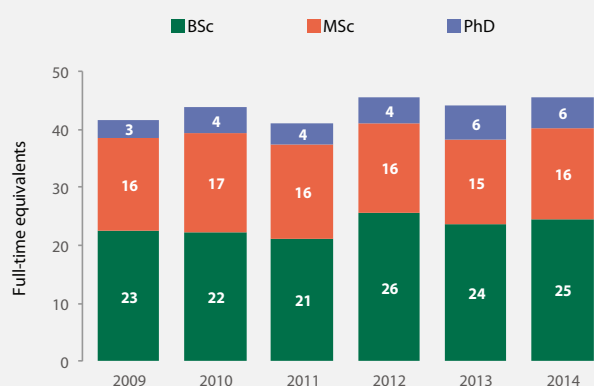
BSc	46%	MSc	46%	PhD	62%
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By age bracket, 2014

< 41	42%	41–50	62%	> 50	42%
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Lesotho's agricultural researchers by qualification level

The total number of agricultural researchers employed in Lesotho changed little during 2008–2014. About half of all researchers were qualified to the BSc level, and about one-third were qualified to the MSc level. PhD-qualified researcher numbers remained low, but increased marginally in 2013.



PhD-qualified and total researchers at DAR and NUL-FA

Lesotho only employs a small number of PhD-qualified agricultural researchers. DAR employed 1 or 2 FTEs on average during 2009–2014, representing only 3–6 percent of its researchers, and NUL-FA employed between 2 and 5 FTEs during the same period, representing roughly 25–50 percent of its researchers.

FTE researchers	DAR			NUL-FA		
	PhD	Total	PhD share	PhD	Total	PhD share
2009	1	32	3%	2	8	26%
2010	2	34	6%	2	8	30%
2011	1	32	3%	3	8	36%
2012	1	37	3%	3	8	39%
2013	2	35	6%	4	9	43%
2014	1	36	3%	5	10	47%

Lesotho's MSc- and PhD-qualified agricultural researchers by discipline

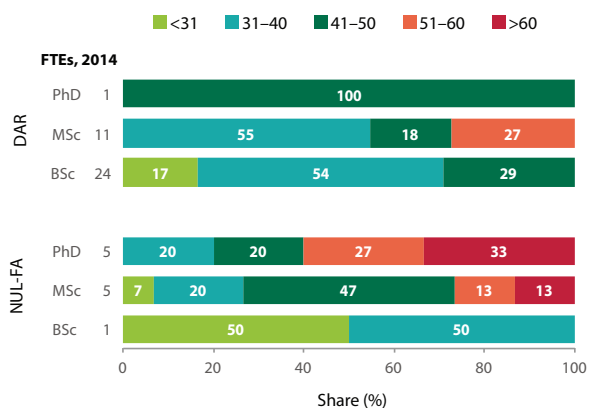
As of 2014, DAR and NUL-FA employed a combined total of 8 researchers with plant breeding/genetics and other crop science disciplines (34 percent of MSc- and PhD-qualified researchers). Biodiversity conservation, soil sciences, and extension and education were also strong disciplines (representing 8–10 percent each of MSc- and PhD-qualified researchers that year).

Agricultural researchers, 2014	FTEs		Share (%)	
	MSc	PhD	MSc	PhD
Plant breeding/genetics (incl. biotechnology)	1	1	6	11
Other crop sciences	5	1	34	11
Animal breeding/genetics	–	1	–	11
Animal husbandry	–	0.3	–	5
Animal nutrition	1	–	8	–
Veterinary medicine	1	–	4	–
Zoology/entomology	–	1	–	18
Forestry and agroforestry	–	–	–	–
Fisheries and aquatic resources	–	–	–	–
Soil sciences	1	1	8	11

Agricultural researchers, 2014	FTEs		Share (%)	
	MSc	PhD	MSc	PhD
Natural resources management	0.3	0.3	2	5
Water and irrigation management	–	–	–	–
Ecology	–	0.3	–	5
Biodiversity conservation	2	–	13	–
Food sciences and nutrition	1	0.3	4	5
Socioeconomics (incl. agricultural economics)	1	–	8	–
Extension and education	1	0.3	8	5
Other sciences	1	1	4	11
Total	16	6	100	100

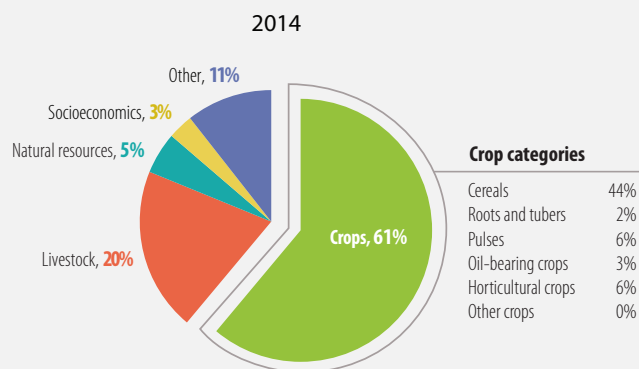
Lesotho's agricultural researchers by age bracket

In 2014, 71 percent of DAR's agricultural researchers with BSc degrees and 55 percent of those with MSc degrees were under 41 years of age. Although absolute numbers were small, on the whole, NUL-FA's MSc- and PhD-qualified researchers were older.



Lesotho's agricultural researchers by area of focus

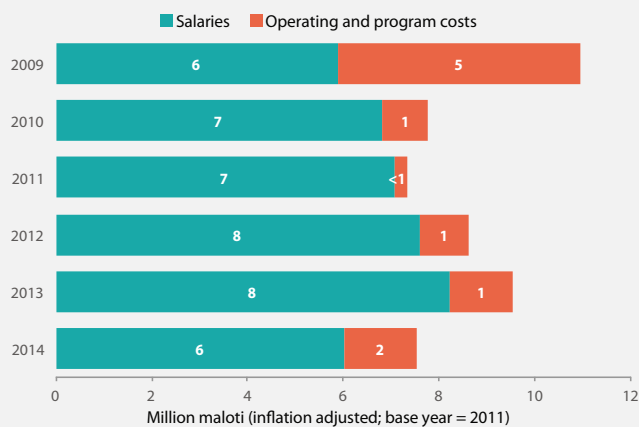
In 2014, 61 percent of the country's FTE researchers conducted crop research, and 20 percent undertook livestock research. The cereal maize and wheat were the main crops under investigation, each accounting for about one third of the total number of researchers. Other major crops included the cereal sorghum, along with beans and vegetables.



Crop category	Share (%)
Cereals	44%
Roots and tubers	2%
Pulses	6%
Oil-bearing crops	3%
Horticultural crops	6%
Other crops	0%

DAR's spending by cost category

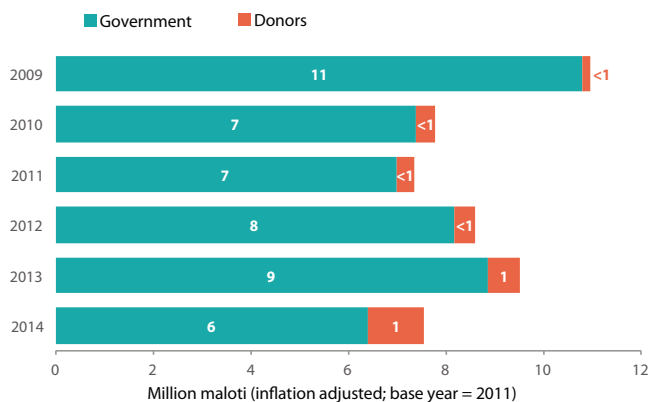
Salary-related expenses accounted, on average, for 80 percent of DAR's total spending during 2009–2014. During this period, operating and program costs were relatively low, except in 2009, and capital investments were nonexistent.



Note: Data for Lesotho correlate with financial rather than calendar years; hence, 2011 represents data for the period April 1, 2011 to March 31, 2012, and so on.

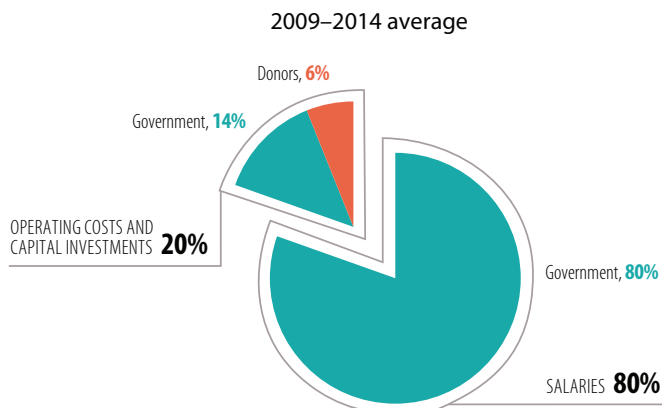
DAR's funding sources

DAR receives almost all of its funding from the government. Only a small (although increasing) share of the department's funding is derived by donors.



DAR's funding and spending compared

DAR's budget allocation is generally only sufficient to cover the cost of staff salaries, leaving very little for day-to-day operating and program expenses or investments in capital infrastructure.



Government budget allocations versus actual disbursements to DAR

Government disbursements to DAR are always lower than approved budget allocations. Moreover, budget levels have fallen over time and, as previously indicated, funding generally only covers the costs of salary-related expenses.

	Thousand maloti (in current prices)		
	Budget	Disbursed	Shortfall
2011	7,389	7,098	-4%
2012	8,302	7,727	-7%
2013	9,124	8,287	-9%
2014	7,079	6,728	-5%
Average	7,973	7,460	-6%

Resources for Lesotho

This factsheet presents recent data on the performance of agricultural research in Lesotho, primarily focusing on key financial, human resource, institutional, and output indicators, while also highlighting relevant trends, challenges, and institutional changes. Additional resources are available at www.asti.cgiar.org and include:



ASTI's **interactive country page** for Lesotho features national agricultural research investment and capacity data, a data exploration and download tool, as well as access to a variety of country publications.



ASTI's **benchmarking tool** allows key agricultural research indicators to be ranked and compared across African countries.



ASTI's **data download tool** provides access to more in-depth ASTI datasets and graphs for Lesotho and many other countries.



ASTI's **agency directory** provides a view of agencies that conduct agricultural research in Lesotho, along with their locations and key agency-level indicators.

français español contact

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LESOTHO

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Key Indicators Financial Resources Human Resources Research Focus Regional comparison

ASTI Data Procedures and Methodologies

- ▶ The **data underlying this factsheet** were predominantly derived through primary surveys, although some data were drawn from secondary sources or were estimated.
- ▶ **Agricultural research** includes research conducted by the government, higher education, and nonprofit sectors; research conducted by the private for-profit sector is excluded due to lack of available data.
- ▶ 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 2011 local currencies and **2011 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 **decimal rounding** can cause totals to be one point higher or lower than the sum of their parts.



For more information on ASTI's data procedures and methodology, visit www.asti.cgiar.org/methodology.

Acronyms

- AgGDP agricultural gross domestic product
- DAR Department of Agricultural Research
- FTE(s) full-time equivalent(s)
- 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

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)**, Lesotho's principal agricultural research agency, falls under the Ministry of Agriculture and Food Security and 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 factsheet. ASTI also acknowledges the Bill & Melinda Gates Foundation and CGIAR Research Program on Policies, Institutions, and Markets for their 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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